Mother-infant attachment in the South African context: a parenting programme

by

RACHEL ZAIDMAN MOGRABI

15410847

Submitted in partial fulfilment of the requirements for the degree

Doctor Philosophiae (Social Work)

in the

Department of Social Work and Criminology

FACULTY OF HUMANITIES

at the

UNIVERSITY OF PRETORIA

SUPERVISOR: DR MP LE ROUX

CO-SUPERVISOR: DR H HALL

January 2019

DECLARATION OF ORIGINALITY

Full names of student: **Rachel Zaidman Mograbi**

Student number: **15410847**

Title of thesis: **Mother-infant attachment in the South African context: a parenting programme**

Declaration

1. I understand what plagiarism is and am aware of the University's policy in this regard.
2. I declare that this thesis is my own original work. Where other people's work has been used (either from a printed source, the Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.
3. I have not used work previously produced by another student or any other person to hand in as my own.
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

SIGNATURE _____

DATE **25 January 2019**

ABSTRACT

Mother-infant attachment in the South African context: a parenting programme

RESEARCHER: Rachel Zaidman Mograbi
SUPERVISOR: Dr MP Le Roux
Dr H Hall
DEGREE: Doctor Philosophiae- DPhil (Social Work)
INSTITUTION: Department of Social Work and Criminology, University of Pretoria

Attachment to significant others is considered to be a universal phenomenon amongst people of all races, cultures and ethnicities, from birth and throughout life. The quality of attachment behaviours of the mother affects the psychological and social functioning of the infant and child. An understanding of maternal and infant attachment behaviours and their quality is key to the social work profession and to mental health practitioners working with children and families. Discovering more about this effect in the South African socio-cultural context therefore formed the rationale for this study.

In this study, the mixed methods research approach was applied as it comprises both a qualitative and a quantitative component. The mixed methods approach led to a wider, more in-depth analysis of the research problem.

A qualitative approach was applied in order to understand the experience of mothers attaching to their infants in the different cultures represented in South Africa. A quantitative approach was applied when the self-developed measuring instrument was used to observe and measure maternal attachment behaviours in different cultures. Scientific accuracy was claimed, with the application of the measuring instrument within a quantitative approach in order to produce accurate and generalisable findings.

The empirical study was started with a qualitative approach: rich data were collected through an extensive literature review, which assisted in compiling suitable questions to construct the questionnaires for the participants. The qualitative data were first collected for phase 1, followed by the quantitative data in phase 2. The process was therefore one of sequential timing within the exploratory mixed methods design. Combining the two datasets provided a deeper understanding of the problem.

From the findings and conclusions in this research, it was apparent that the attachment behaviours of the mother-infant dyad are affected by the reciprocal influences of people in their environmental systems. Alongside this finding, the instinctual need for

mothers to attach to their infants was highly valued and recognised by many participants from the represented South African cultures. The importance of maternal sensitivity towards their infants was appreciated by the participants, although within certain limitations as expressed by the values of not spoiling the infant and encouraging independence in the infant. The importance of physical care more than emotional care of the infants was prioritised by many participants. Social adversities and modern lifestyles were found to play a significant role in participants valuing the physical care of their infants over emotional bonding and attachment experiences with them. Extended family networks, and their cultures, were found to contribute strongly to the raising of infants in South Africa and to the transference of parenting norms, values and practices from one generation to the next. The participants from the represented cultures benefitted from and enjoyed the multi-cultural group discussions in the parenting programme, realising that they are not alone but more similar in many more respects than was initially thought.

Attachment-based programmes in South Africa need to focus on transferring the importance of sensitive, responsive maternal care within a culturally sensitive framework. Attachment in a South African context should be observed and measured with careful attention to variance in certain indicators, due to the effect of socio-cultural factors. The contemporary mother of today is influenced by diverse socio-cultural factors within the environment that affect her maternal behaviours and, in turn, the secure base of the infant she raises.

Key concepts:

- Mother
- Infant
- Attachment
- Attachment behaviours
- Maternal attachment behaviours
- Infant attachment behaviours
- Parent
- Parenting programme
- Attachment-based parenting programme

ACKNOWLEDGEMENTS

I would like to acknowledge the following people and thank them for their contributions that made it possible to complete this thesis:

- Dr MP Le Roux and Dr H Hall for their careful and in-depth guidance, professional knowledge and support. Their understanding, skill and proficiency made this research possible.
- Prof LS Geyer for his assistance with the statistical data analysis.
- Mr Craig Marc Stevens for his thorough and competent editing and layout design of the thesis, and for always being a true and loyal friend.
- Mrs Leani Coetzee for her careful independent observation in the study, and for being a reliable friend.
- A big thank you to all my research participants, without whom this study would not have been completed.
- My wonderful parents for their enduring unconditional love, support and belief in me throughout the process.
- My two children, Ethan and Angelina, for being my reason to continue this research project, and for their never-ending love and encouragement. Your mere presence gave me enough reason to keep going.
- My dearest husband, Ramon, for his technical support, encouragement and patience, and for loving me.
- My family, friends and colleagues for their continued encouragement and interest.

DEDICATION

It is with great honour and love that I dedicate this thesis to my father – my secure base. Always one step behind, beside and in front of me.

TABLE OF CONTENTS

DECLARATION i
ABSTRACT ii
ACKNOWLEDGEMENTS v
DEDICATION vi

CHAPTER 1: INTRODUCTION TO THE RESEARCH STUDY 1
1.1 INTRODUCTION 1
1.2 RATIONALE AND PROBLEM STATEMENT 7
1.3 GOAL AND OBJECTIVES OF THE RESEARCH STUDY 10
1.4. RESEARCH METHODOLOGY 11
1.5 LIMITATIONS OF THE STUDY 13
1.6 CONTENTS OF THE RESEARCH REPORT 13

CHAPTER 2: THEORETICAL FRAMEWORK OF THE STUDY 16
2.1 INTRODUCTION 16
2.2 THE THEORY OF ATTACHMENT 16
2.2.1. Classic attachment theory 17
2.2.2 John Bowlby's attachment theory 20
2.2.3 Criticism of classic attachment theory 30
2.3 ECOLOGICAL SYSTEMS THEORY 31
2.3.1 The ecological systems theory of Urie Bronfenbrenner 31
2.3.1.1 The microsystem 31
2.3.1.2 The mesosystem 32
2.3.1.3 The exosystem 32
2.3.1.4 The macrosystem 33
2.3.1.5 The chronosystem 34
2.4 SUMMARY 36

CHAPTER 3: CONCEPTUALISATION OF MOTHER-INFANT ATTACHMENT 37
3.1 INTRODUCTION 37
3.2 CONCEPUALISING ATTACHMENT 37
3.2.1 The definition of attachment 37
3.2.2 The neurobiology of attachment 39
3.2.3 The secure base 41
3.2.4 Proximity seeking and exploration 42
3.2.5 Separation anxiety 43
3.3 THE INTERNAL WORKING MODEL 44
3.4 THE DEVELOPMENT OF ATTACHMENT 47
3.4.1 The stages of development of attachment 47
3.4.2 The ontogeny of attachment in toddlerhood, pre-school and middle childhood years 49
3.4.3 Attachment formation with primary and secondary attachment figures 51
3.5 ATTACHMENT STYLES 53
3.5.1 Secure attachment 54
3.5.2 Avoidant attachment 55
3.5.3 Resistant (ambivalent) attachment 56

3.5.4 Disorganised attachment 57
3.6 THE STABILITY OF ATTACHMENT 58
3.7 ATTACHMENT BEHAVIOURS 59
3.7.1 Infant attachment behaviours 59
3.7.2 Caregiver attachment behaviours 61
3.7.3 The development of early attachment behaviours: the work of Margaret Mahler 62
3.7.4 Reciprocal mother-infant behaviours associated with secure and insecure attachment 66
3.8 THE LONGTERM EFFECTS OF SECURE AND INSECURE ATTACHMENT 73
3.8.1 The psychosocial effects of attachment 73
3.8.2 The effects of attachment on the sense of self 74
3.8.3 The effects of attachment on interpersonal relationships 74
3.8.4 Attachment disorders 76
3.8.4.1 Reactive Attachment Disorder (RAD) 77
3.8.4.2 Disinhibited Social Engagement Disorder (DSED) 77
3.8.4.3 Coercive therapeutic approaches applied to treat attachment disorders 78
3.9 CONTEXTUAL FACTORS THAT INFLUENCE ATTACHMENT 78
3.9.1 Psychosocial factors that affect attachment 79
3.9.1.1 Extreme poverty 79
3.9.1.2 Deprived care environments 79
3.9.1.3 Child maltreatment 80
3.9.1.4 Unwanted pregnancies 80
3.9.1.5 Maternal depression 81
3.9.2 Socio-cultural factors that influence attachment 81
3.9.2.1 Culture 81
3.9.2.2 Acculturation 83
3.10 SUMMARY 84

CHAPTER 4: LITERATURE REVIEW ON THE MEASUREMENT OF ATTACHMENT AND ON ATTACHMENT PROGRAMMES 85
4.1 INTRODUCTION 85
4.2 MEASUREMENT OF ATTACHMENT 85
4.2.1 The infant Strange Situation Procedure 85
4.2.2 The Marshak Interaction Method 87
4.2.3 The Infant –CARE Index 87
4.2.4 The Attachment Q-Sort Test 88
4.2.5 The Still Face Procedure 89
4.2.6 The Maternal Attachment Inventory 90
4.2.7 The Adult Attachment Interview 91
4.2.8 The Transition to Adulthood Attachment Interview 92
4.2.9 Questionnaires for measuring attachment 92
4.2.10 The Attachment Projective System 93
4.2.11 INTAKT instrument for assessing mother-child interaction 94
4.2.12 Discussion of instruments measuring attachment 95
4.3 INDICATORS OF ATTACHMENT USED IN ATTACHMENT-BASED MEASURES 96
4.3.1 Maternal sensitivity 96
4.3.2 Parental feedback 97
4.3.3 Joint attention 97

4.3.4 Reunion behaviour 99
4.3.5 Discussion of indicators applied to measures of attachment 99
4.4 ATTACHMENT-BASED PROGRAMMES WITH INFANTS AND CHILDREN 100
4.4.1 The length of attachment programmes 100
4.4.2 The focus of attachment programmes 101
4.4.2.1 Parental internal working models 101
4.4.2.2 Parental behaviours 102
4.4.2.3 Child characteristics 104
4.4.3 Educational programmes 104
4.4.4 Community-based programmes 105
4.4.5 Method of instruction of attachment-based programmes 106
4.4.5.1 Bi-directional method of instruction 106
4.4.5.2 Video feedback method of instruction 106
4.4.5.3 Verbal method of instruction and video analysis 107
4.4.5.4 Home-based versus centre-based method of instruction 107
4.4.5.5 Community-based educational method of instruction 108
4.5 ATTACHMENT-BASED PROGRAMMES IN SOUTH AFRICA 109
4.5.1 Community-based programmes 109
4.5.2 Home visit programmes 111
4.5.3 Concluding discussions 111
4.6 SUMMARY 112

CHAPTER 5: QUALITATIVE AND QUANTITATIVE METHODOLOGY 114
5.1 INTRODUCTION 114
5.2 GOAL AND OBJECTIVES OF THE RESEARCH STUDY 114
5.3 RESEARCH QUESTION 114
5.4 RESEARCH APPROACH 115
5.5 TYPE OF RESEARCH 116
5.6 RESEARCH DESIGN AND METHODS 119
5.6.1 Research design 119
5.6.2 Research population and sampling 122
5.6.3 Data collection 126
5.6.3.1 Qualitative data collection 127
5.6.3.2 Quantitative data collection 128
5.6.4 Data analysis 130
5.6.4.1 Qualitative data analysis 130
5.6.4.2 Quantitative data analysis 134
5.7 PILOT STUDY 136
5.8 ETHICAL CONSIDERATIONS 137
5.8.1 Beneficence and avoidance of harm 137
5.8.2 Informed consent and voluntary participation 138
5.8.3 Respect for anonymity, confidentiality and privacy 139
5.8.4 Debriefing 140
5.8.5 Actions and competence of the researcher 140
5.8.6 Publication of findings 141
5.9 SUMMARY 141

CHAPTER 6: QUALITATIVE RESEARCH RESULTS: FIRST PHASE OF DATA COLLECTION 142
6.1 INTRODUCTION 142
6.2 DEMOGRAPHIC PROFILE OF RESEARCH PARTICIPANTS 142
6.3 QUALITATIVE RESEARCH FINDINGS 146
6.3.1 Theme 1: Attachment is an innate quality 148
6.3.2 Theme 2: The influence of culture 155
6.3.3 Theme 3: Primary and secondary attachment figures 164
6.3.4 Theme 4: The concept of sensitive care 176
6.3.5 Theme 5: Parenting practices that might affect attachment behaviours 183
6.3.6 Theme 6: Socio-economic circumstances 198
6.3.7 Theme 7: Suggestions for content of an attachment-based programme for the South African context 205
6.3.8 Theme 8: Measurement of attachment behaviours 219
6.4 DISCUSSION 230
6.5 SUMMARY 234

CHAPTER 7: DEVELOPMENT OF THE ATTACHMENT-BASED PARENTING PROGRAMME AND MEASURING INSTRUMENT 235
7.1 INTRODUCTION 235
7.2 THE POTENTIAL INFLUENCE OF CULTURE ON ATTACHMENT 236
7.2.1 Diverse socio-cultural practices with regards to mother-infant attachment 237
7.2.2 Diverse cultural practices with regards to the measurement of attachment 242
7.3 THE SOUTH AFRICAN CONTEXT 243
7.3.1 The South African socio-cultural context 244
7.3.2 The South African socio-economic context 246
7.4 THE DEVELOPMENT OF THE ATTACHMENT-BASED PARENTING PROGRAMME 248
7.4.1 The focus of the attachment-based programme 249
7.4.2 Content of the attachment-based programme 250
7.4.2.1 Attachment is an innate biological process 250
7.4.2.2 The influence of culture and acculturation 251
7.4.2.3 The concepts of attunement, responsiveness and maternal/caregiver sensitivity 251
7.4.2.4 Caregiver behaviours that could enhance secure attachment 252
7.4.3 Factors that affect the development of attachment 256
7.4.4 Implementation of the attachment-based programme 258
7.5 THE DEVELOPMENT OF THE MEASURING INSTRUMENT 264
7.5.1 The focus of the measuring instrument 265
7.5.2 Process of the development of the measuring instrument 265
7.5.3 The content of the measuring instrument 266
7.5.4 Categories applied to the measuring instrument 267
7.5.4.1 Maternal sensitivity 267
7.5.4.2 Maternal interactive style 268
7.5.4.3 Maternal feedback 270
7.5.5 The implementation of the measuring instrument 270
7.5.6 Outline of the measuring instrument 271
7.5.7 Considerations in implementation of the measurement instrument 279
7.6 SUMMARY 279

CHAPTER 8: RESEARCH FINDINGS: THE INFLUENCE OF THE ATTACHMENT-BASED PARENTING PROGRAMME **280**
8.1 INTRODUCTION 280
8.2 BIOGRAPHICAL PROFILE OF THE PARTICIPANTS 280
8.3 QUANTITATIVE RESEARCH RESULTS 283
8.3.1 Pre-and post-test results for constructs 283
8.3.2 Difference in results within the experimental group 284
8.3.3 Difference in results between experimental and comparison group 285
8.3.4 Discussion of quantitative research findings 286
8.4 QUALITATIVE RESEARCH FINDINGS 287
8.4.1 Theme 1: Participants understanding of attachment (After attending the attachment-based programme) 289
8.4.2 Theme2: The influence of culture on parenting behaviours 293
8.4.3 Theme 3: Single versus multiple caregiving 298
8.4.4 Theme 4: Heightened awareness of behaviours related to sensitive care 300
8.4.5 Theme 5: Learning and growth as a mother 305
8.4.6 Theme 6: Self-understanding and self-care 311
8.4.7 Theme 7: Suggestions for improving the attachment-based programme 316
8.5 REFLECTION ON THE IMPLEMENTATION OF AND FINDINGS RELATED TO THE ATTACHMENT-BASED PROGRAMME 320
8.6 SUMMARY 322

CHAPTER 9: KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS **323**
9.1 INTRODUCTION 323
9.2 RESEARCH GOALS AND OBJECTIVES 323
9.3 KEY FINDINGS AND CONCLUSIONS 326
9.3.1 The theoretical framework of the study 326
9.3.2 The conceptualisation of attachment 328
9.3.3 Attachment programmes and measurements of attachment 329
9.3.4 Empirical findings 331
9.3.4.1 Attachment is an innate quality and sensitive care valued across cultures 331
9.3.4.2 The influence of culture and acculturation 331
9.3.4.3 Knowledge of attachment 332
9.3.4.4 Primary and secondary attachment figures 332
9.3.4.5 The concept of sensitive care 332
9.3.4.6 Parenting practices that might affect attachment 333
9.3.4.7 The influence of socio-economic circumstances 334
9.3.4.8 The implementation of an attachment-based parenting programme 335
9.3.4.9 Influence of the attachment-based programme 336
9.4 RECOMMENDATIONS 336
9.4.1 Recommendations for practice 336
9.4.2 Recommendations for future research 338
9.5 ACCOMPLISHMENT OF THE GOAL AND OBJECTIVES OF THE STUDY 338
9.6 ANSWERING THE RESEARCH QUESTIONS 340
9.7 CONCLUDING REMARKS 341

REFERENCES **342**

LIST OF TABLES

Table 5.1: Data collection 130

Table 6.1: Biographical profile of research participants (mothers) 143

Table 6.2: Biographical profile of research participants (professionals) 144

Table 6.3: Biographical profile of research participants (experts in field of attachment) 146

Table 6.4: Themes and sub-themes 146

Table 7.1: Outline of attachment-based parenting programme 260

Table 7.2: Outline of measuring instrument 271

Table 8.1: Biographical profile of research participants (experimental group) 280

Table 8.2: Biographical profile of research participants (comparison group) 281

Table 8.3: Construct comparison between groups (pre- and post-test) 284

Table 8.4: Test statistics for construct 1 285

Table 8.5: Test statistics for construct 2 285

Table 8.6: Test statistics for construct 3 285

Table 8.7: Test statistics for construct 1 285

Table 8.8: Test statistics for construct 2 285

Table 8.9: Test statistics for construct 3 285

Table 8.10: Themes and sub-themes 288

Table 9.1: Accomplishment of the study objectives 339

LIST OF APPENDICES

Appendix A: Ethical Approval - Netcare Hospital 363

Appendix B: Interview Schedule - Biological Mothers (Phase 1) 370

Appendix C: Interview Schedule - Helping professionals (Phase 1) 373

Appendix D: Interview Schedule – Mothers in Mother-infant Dyads (Phase 2) 376

Appendix E: Ethical Approval - University of Pretoria 379

Appendix F: Informed consent - Helping professionals (Phase 1) 382

Appendix G: Informed consent – Biological Mothers (Phase 1) 385

Appendix H: Informed consent – Mother-infant Dyads (Experimental Group – Phase 2) 389

Appendix I: Informed consent - Mother-infant Dyads (Comparison Group – Phase 2) 393

Appendix J: Confidentiality Agreement..... 397

LIST OF FIGURES

Figure 3.1: Secure base behaviours **……** 41

CHAPTER 1

INTRODUCTION TO THE RESEARCH STUDY

1.1 INTRODUCTION

Attachment is defined as a powerful emotional connection one has with significant others, whose nearness leads to pleasure and fulfilment, and whose presence provides comfort during stressful and traumatic times (Berk, 2013:428; Minde, Minde & Vogel, 2006:546). The first attachment in life is usually between an infant and her[1] primary caregiver, mostly the mother. The term attachment has become generalised, however, there is lack of clarity around the concepts surrounding attachment such as attachment disorder, attachment problems and attachment therapy (McLean, Riggs, Kettler & Delfabbro, 2013:244).

Primary attachment focuses on the emotional bond developing between an infant and her mother or primary caregiver. It includes the pattern of emotional and behavioural interaction that forms over time between the caregiver and infant in their dyadic relationship in a specific environment, which fulfils the infant's need for attention and comfort (Berk, 2013:428; Minde et al., 2006:546). According to John Bowlby's attachment theory, the first relationship between an infant and main caregiver forms the foundation for the child's psychosocial development throughout life (Keller, 2015:176). The quality of attachment can either enhance the well-being of a person or lead to later psychopathology.

John Bowlby (1969), the founder of attachment theory, based his understanding of attachment on ethological theory (Berk, 2014:24; Keller, 2015:179). Ethology focuses on the evolutionary history of behaviour, on behaviour patterns and how they are modified for adaptation and survival purposes (Berk, 2013:23, Keller, 2015:179-180). The attachment behaviours of babies, such as babbling, grasping and crying are built-in signals that encourage the parent to be close to and look after the baby (Bick & Dozier, 2013:95; Keller, 2015:179). The goal of keeping the mother near is to ensure the baby's survival and optimal growth through feeding, protection, affection and stimulation (Minde et al., 2006:546). Based on ethological theory, there is a sensitive period or optimal time frame for the development of an infant's attachment to a caregiver (Berk, 2013:24).

The first few years of life are considered to be a sensitive period for the development of attachment (Berk, 2013:429; Bick & Dozier, 2013:96). A sensitive period of development is defined as a specific period of time where there is a heightened likelihood for certain abilities to develop as the infant is more particularly responsive to environmental influences (Minde et al., 2006:546). Therefore, if parents provide sensitive, reliable care during the first two years of life, secure attachment is formed, leading to better social, psychological and scholastic developmental outcomes over the short and long term (Cooper, Tomlinson,

[1] When referring to the infant, child or baby, the female form will be used. No gender bias is intended.

Landman, Swartz, Molteno, Stein, McPherson, Murray 2009:1). Sensitive care relies on the attunement, or interactional synchrony, between the primary caregiver and infant. Attunement implies the caregiver responds to the infant's behavioural signals both in a well-timed and accurate manner (Mingo & Easterbrooks, 2015:471, Stern, 2002:92).

The caregiving experiences of the child[2] during the sensitive period for the development of attachment, results in the development of either a secure or insecure attachment. Secure attachment refers to a process where an infant develops a predictable, positive expectation of the behaviour and responsiveness of the main caregiver[3] for fulfilling the emotional and practical needs of the infant, while insecure attachment leads to an unpredictable, less positive expectation of caregiver behaviour (Bick & Dozier, 2013:95). As a consequence of the infant's actual care experiences, the infant develops a mental representation of the behaviour and responsiveness of the caregiver, known as the internal working model (Huber, McMahon & Sweller, 2015:558).

The internal working model serves as a mental template for the child's expectations of interaction with others and their availability and support during times of stress, which guides all future close relationships (Berk, 2013:430). The internal working model is based on expectations of the availability of attachment figures and their ability to provide support during difficult times, as well as on the self-image formed due to the relationship with these figures (Mingo & Easterbrooks, 2015:471). This model then has an influence on the individual's expectations and behaviour in relationships throughout life (Keller, 2015:177).

An internal working model that is based on secure attachment leads to positive mental representations of the self, the main caregiver, and the environment, and enhances psychosocial development and functioning throughout life (Freeman, 2014:546; Huber et al., 2015: 558). Bowlby (1969) stressed the importance of the quality of attachment between an infant and caregiver as essential for the child's psychological development and ability to form trusting relationships later on in life (Berk, 2013:428-429).

Researchers such as Mary Ainsworth (1978) and Main and Solomon (1986) and their colleagues identified four types of attachment; being secure attachment and three types of insecure attachment. The three types of insecure attachment include avoidant, resistant (ambivalent) and disorganised attachment (Berk, 2013:430-431; Louw & Louw, 2014:134; Sigelman & Rider, 2009:414-415).

The type of attachment and the internal working model formed as a result, have a substantial influence on the future development of the child. Secure attachment predicts more optimal developmental outcomes, such as a positive self-esteem, self-perception and identity (Cooper et al., 2009:1; O'Connor & Scott, 2007:9). Research has found associations

[2] The terms baby, child and infant are used interchangeably throughout this study.

[3] The terms mother and caregiver are used interchangeably throughout this study, depending on the literature and context.

between parent-child relationship quality and parenting styles, and aggressive behaviour, delinquency, depression, anxiety and other internalising problems in children (O'Connor & Scott, 2007:7). Children's internalisation of their attachment experiences (the internal working model) affects their perception of others as well as their expectations of how others would behave towards them (O'Connor & Scott, 2007:9). Secure attachment is associated with enhanced social competence, and securely attached infants have been found to be enthusiastic, persistent, and co-operative, with higher levels of empathy and pro-social skills later in life, popularity among peers and friends, and enhanced relationship quality both in the present and longitudinally (Egeland, 2009:1; O'Connor & Scott, 2007:7). Conversely, insecure attachment predicts difficulties related to interpersonal relationships (Cooper et al., 2009:1).

Secure attachment is a protective factor, even when faced with adversity (Cooper et al., 2009:1). Furthermore, brain development is affected by the quality of attachment and links have been found between the quality of parent-child attachment and a child's cognitive and educational outcomes (Baker, 2014:41; Egeland, 2009:1). Sensitive parenting leading to secure attachment during infancy predicts fewer behaviour problems in children (Egeland, 2009:1). Positive experiences and interactions between the caregiver and infant are thus critical for building a more secure self and secure future relationships with others (Freeman, 2014:545).

The attachment behaviour of the caregiver and infant lies at the basis of attachment and will determine the quality of attachment (Louw & Louw, 2014:135). In his theory on attachment, Bowlby indicates that the relationship between an infant and caregiver starts out with inborn and instinctive behaviours of the infant to get the caregiver's attention (Berk, 2013:429). These built-in social signals, such as crying, grasping, sucking, looking, smiling and babbling are aimed at keeping the caregiver in close proximity, mainly for the purpose of survival (Berk, 2013:24; Louw & Louw, 2014:135; Minde et al., 2006:546). Based on the caregiver's sensitive and timely reactions to these attachment-seeking behaviours, an affectionate bond between the caregiver and the infant develops, and the child uses the caregiver as a secure base. The infant is relaxed and safe in the presence of this caregiver (the attachment figure), knowing that she can consistently rely on the caregiver for protection and emotional and physical support over time (Berk, 2013:429-430). This person thus serves as a secure base for the infant (Berk, 2013:408). An infant will try to maintain proximity to the attachment figure by means of crying, clinging or approaching, and will express displeasure when she cannot obtain such closeness (Keller, 2015:179).

Sensitive parenting, defined as a regular, prompt and appropriate pattern of response to an infant child, and attunement between the caregiver and child support the development of secure attachment (Berk, 2013:434; Mingo & Easterbrooks, 2015:471). Attunement refers to the ability of the caregiver to respond to the infant's signals in an accurate and timely manner (Mingo & Easterbrooks, 2015:471). Caregivers who are sensitive to the cues of the

infant and respond consistently to the infant's needs, contribute to the development of secure attachment, while caregivers who are rejecting, unavailable, irritable, abusive or neglectful, have little physical contact with the infant, show little affection, and do not respond timeously to the signals of the infant, are likely to contribute to an insecure attachment in the infant (Sigelman & Rider, 2009:195-196). It is recognised that the attachment behaviours of the caregiver are, however, greatly influenced by contextual factors such as socio-economic and socio-cultural circumstances.

Socio-economic factors can have a significant influence on attachment behaviours. The stresses linked to living in poverty, single parent households, parental unemployment, marital difficulties, exposure to trauma, and a lack of social support will impact the degree of sensitive care a parent can provide (Louw & Louw, 2014:136; Tomlinson, Cooper & Murray, 2005:1044-1045). In the South African context, studies in the informal settlement of Khayelitsha indicated that the lower socio-economic status and high levels of unemployment, poverty and maternal depression had negative implications for mother-infant attachment (Cooper et al., 2009:1045). A high prevalence of more coercive-intrusive parental behaviour and/or remote-disengaged caregiving was found (Cooper et al., 2009:1045). Despite the multitude of external stressors in the developing world which may directly impact the parents' capacity to be responsive to their infants, there is a lesser focus on infant and child development in the developing world than in the developed world (Bain, 2014:593; Cooper et al., 2009:1044).

Furthermore, culture strongly impacts the attachment behaviours of both mothers and infants (Keller, 2015:183; Tomlinson et al., 2005:1044). German parents, for example, encourage independence and less emotionally expressive behaviour in their children, while in the Japanese culture, mothers are kept very close to their babies and dependence is encouraged (Keller, 2015:182). "Normal" attachment behaviours according to Euro-American middle-class culture commonly focus on the mother and infant, however multiple caregiving arrangements are the norm in many non-Western contexts, which comprise most of the world (Keller, 2015:183). In Sub-Saharan African cultures and in India, exclusive mothering has been found to be an exception and the infant is usually being cared for by multiple caregivers (Keller, 2015:182183). Santrock (2009:195) highlights the fact that attachment theory is often criticised as "it ignores the diversity of socializing agents and contexts that exists in an infant's world." The socio-cultural context can also influence the measurement of attachment.

There are a number of standardised measuring instruments for attachment applied in the Western world, for example the Infant Strange Situation Procedure (SSP), the Adult Attachment Interview (AAI), the Transition to Adult Attachment Interview (TAAI), the Infant CARE-Index and the Attachment Q-Sort (Berk, 2013:431; Minde et al., 2006:547); three of which focus on mother-infant behaviours. Mercer (2015:384) points out that there are a lack of professional trainers or coders that can implement the first four measures of

attachment in South Africa and, furthermore, no standardised or formal measures of attachment have been developed for the South African context.

As attachment is influenced by contextual factors, some authors question the applicability of measuring instruments of attachment in different contexts. As an example, the concept of stranger anxiety which is used when measuring styles of attachment, differs in Western and non-Western cultural contexts (Tomlinson, 2001:42). With the Beng people in West Africa, infants are socialised from birth into welcoming all strangers, thus no Beng infants really show behavioural signs of stranger anxiety. A similar welcoming attitude has been found amongst Brazilian Piranha Indians (Keller, 2015:184).

Parenting programmes could be an effective measure to equip parents with knowledge and skills to enhance mother/caregiver-infant attachment (Baker, 2014:51). Interventions that are implemented early in life have been found to be successful in the Western world (Egeland, 2009:4) however it appears that high-risk families require more intense, comprehensive, and long-term interventions (Cooper et al., 2009:2).

Cooper et al. (2009:1) indicate that few parenting programmes with a focus on attachment have been developed in South Africa and believe that there is an urgent need for parent-child interventions in developing world countries such as South Africa. Furthermore, there is little information and research on existing attachment-based parenting programmes in South Africa as well as on the quality of services and change they ultimately bring about (Baker, 2014:1; Cooper et al., 2009:2).

Authors further question the suitability of measuring instruments for attachment that have been developed in a Western context for use in a third world context such as South Africa. Most parenting interventions in the developing world use measuring instruments that have been devised in a developed world context, with the result of not much being known about measuring attachment in a South African context (Cooper et al., 2009:2, Bain, 2014:594). Louw and Louw (2014:135) mention that although instruments such as the Strange Situation are useful, there are suggestions that it is not applicable for cross-cultural use. In this regard, Berk (2013:432) states that "Cross-cultural evidence indicates that attachment patterns may have to be interpreted differently in certain cultures." The measurement of attachment should give consideration to the greater context and culture rather than only focusing on discrete behavioural variables (Funamoto & Rinaldi, 2014:9; Tomlinson, 2001:47).

The researcher aimed to address the above suggestions through this study by exploring the potential influence of the South African socio-cultural context on the maternal attachment behaviours that could influence the development of mother-infant attachment. The information obtained informed the development of an attachment-based parenting programme focusing on attachment within the South-African context. An observation scale

taking the potential influence of local culture on mother-infant attachment behaviours into consideration was developed for pilot testing a prototype of the programme.

The **key concepts** relevant to this study are as follows:

In this study a **mother** will refer to the biological mother of the child. A biological mother is defined as a female parent who is a woman who gives birth to a child and who holds a position of authority, status, function or responsibility of a female parent (Minde et al., 2006:547; Moffitt, 2002:727). The focus of this study will be on young adult mothers. A young adult mother refers to a mother in early adulthood, thus between the ages of 20 and 40 years (Santrock, 2009:16; Sigelman & Rider, 2009:4). As indicated, the terms 'mother' and 'caregiver' will be used interchangeably in this study.

An **infant** child is defined as a human child from birth to the end of the first year of life (Bick & Dozier, 2013:95). An infant has emotional and physical needs that include love and security, a need for trust, warmth and comfort, as well as a feeding and sucking need (Bick & Dozier, 2013:96). Infants are born with an innate need for contact, company and communication apart from their physiological needs (Jennings, 2011:112). Infancy is the life stage in which children form their first intimate ties with others (Berk, 2013:5). Therefore, infancy is a sensitive period for the development of attachment (Berk, 2013:429; Keller, 2015:179; Louw & Louw, 2014:133-134).

Attachment is defined as the emotional connection between a primary caregiver, usually the mother, and her infant child. Within this relationship, the child experiences comfort in the caregiver's presence as well as safety during times of distress (Berk, 2013:428; Louw & Louw, 2014:132). Attachment thus refers to the emotional bond and availability that characterises the relationship between a biological mother and her infant child (Jennings, 2011:57). Infant attachment is defined as an infant's emotional connection with her mother based on early mother-infant interactions (Hall, Hoffenkamp, Tooten, Braeken, Vingerhoets & Bakel, 2015:321). Although there is a general consensus that 'good enough' attachment leads to positive child development, there is still insufficient knowledge and literature on the nature of attachment (Jennings, 2011:57).

Attachment behaviours are defined as the interactions between a mother and infant (Keller, 2015:185). Social interaction lies at the core of attachment and these interactions will determine the quality of attachment (Louw & Louw, 2014:135). **Infant attachment behaviour** refers to actions aimed at eliciting a response from the mother or caregiver, for example gazing, crying, clinging and smiling (Stern, 2002:50-68). **Maternal attachment behaviour** refers to the sensitivity and responsiveness of the mother to the infant's needs (Berk, 2014:429; Louw & Louw, 2014:135; Mckenna, 2009:16). In this study, attachment behaviours will refer to these reciprocal interactions between the mother and her infant child. Research on attachment has demonstrated the importance of mothers' interactions with their children, and how these interactions influence a child's later development

(Jennings, 2011:106; Siegel & Hatzell, 2003:31). When observing attachment behaviours, one must focus on the mother or main caregiver's behavioural responses, and the infant's behaviours towards the mother (Stern, 2002:25).

Caregiving behaviours are influenced by the cultural context (Berk, 2013:432; Louw & Louw, 2014:135; Tomlinson, 2001:42; Tomlinson et al., 2005:1044), and could thus influence maternal attachment behaviours. In this study, the focus on the development and pilot-testing of an attachment-based parenting programme will therefore focus primarily on maternal attachment behaviours.

A **parent** is defined as the primary caregiver in a child's life (Chandre & Ward, 2015:2). Traditionally, parenting was perceived as the care of a biological child by an adult, which involves either giving birth to the child, being married to the mother or father of a child, as well as adopting a child (Baker, 2014:26). In modern times, this definition has been adapted due to the change in modern-day families with an increasing number of extra-marital births in developed and developing countries (Baker, 2014:26).

A **parenting programme** is defined as an educational programme which focuses on teaching parents the strategies that influence their behaviour so that they can avoid evidence-based risk factors associated with the occurrence of disorders in children (Delawarde, Saias & Briffault, 2014:170). An **attachment-based parenting programme** is defined as a learning process that aim to provide parents and caregivers the knowledge and skills required to positively enhance their child rearing, based on learning how to engage in a sensitive and positively responsive interplay between mother/caregiver and infant (Baker, 2014:11). Many parenting programmes focus on parents, infants and children who are at risk and vulnerable, facilitating more positive parenting skills by means of psychotherapeutic and/or cognitive behavioural approaches (Lee et al., 2013:265; Velderman, Bakermans-Kranenburg, Juffer & Van Ijzendoorn, 2006:266). Such a programme will be based on a number of empirically supported theoretical approaches.

The programme in this study endeavoured to focus on attachment behaviours between mother and infant, and to enhance the parental skills of the mother to attach sensitively to her infant child.

1.2 RATIONALE AND PROBLEM STATEMENT

The first few years of life are critical for the development of attachment (Berk, 2013:429; Bick & Dozier, 2013:96). Sensitive, reliable infant care which enhances secure attachment leads to improved developmental outcomes over the short and long term for the infant (Cooper et al., 2009:1), thus supporting the need for the study. The quality of attachment that a child forms during infancy will affect her development during childhood and can have long-term effects lasting into adulthood (Freeman, 2014:546; Huber et al., 2015: 558). Secure attachment results in a positive internal working model or internalised image of the

self and significant others, while insecure attachment leads to a view of the self as unlovable, and others as unreliable (Mingo & Easterbrooks, 2015:471; Sigelman & Rider, 2009:407-408). The consequences of insecure attachment are vast, leading to numerous psychosocial problems (Tomlinson et al., 2005:1044).

Socio-economic conditions in developing countries can impair parents' ability to provide sensitive and consistent care (Bain, 2014:593; Tomlinson, 1997:42). Factors such as poverty, inequality, maternal depression, single parenting and work stress can affect the mother-infant bond and impact on attachment behaviours (Aspoas & Amod, 2014:583-584).

South Africa is a developing country with socio-economic challenges that could severely compromise the ability of parents to provide sensitive care to their children (Bain, 2014:593; Cooper et al., 2009:1; Tomlinson, 2001:47, 49). In the South African society, there are many situations where mothers separate from their infants at a very young age due to cultural expectations, the mother's age and work and/or school constraints (Blumberg, 2013:8; Keller, 2015:180). These separations lead to secondary caregivers taking over in various forms at different times in the infant's life, affecting the mother-infant bond and the secure attachment of the infant. Fostering secure attachment in the midst of such psychosocial stressors thus needs to be a research focus in the developing world (Cooper, et al., 2009:1).

In addition, it has been found that culture has an influence on mother-infant attachment. Culture entails the values and beliefs that guide the daily interactions among people within their community (Garcia Coll & Magnuson, 2000:97; Louw et al., 2014:13; Mckenna, 2009:26). Culture thus has a significant influence on infant caregiving practices and affects the attachment behaviours of both mothers and their infants (Arnett, 2016:174; Keller, 2015:183). Mother-infant attunement has been found to be influenced by culture (Funamoto & Rinaldi, 2014:9). An American mother, for instance, will value an alert, active, talkative and responsive child, whilst an African mother will value a respectful, quiet child who does not seek too much attention (Tomlinson, 2001:49). The influences of socio-cultural aspects therefore need to be considered and further researched in interventions focused on mother-infant attachment. Furthermore, caregiving arrangements are strongly determined by culture. In Western contexts, for example, the mother as caregiver is accepted as the norm. However, in non-Western contexts, exclusive caregiving by the mother is the exception as children are being cared for by multiple caregivers (Keller, 2015:183; Mckenna, 2009:45-47).

It is thus crucial to disseminate knowledge of the widespread effects of insecure attachment in the developing world and thus ultimately the effect of an insecure base of self, affecting the psychosocial stability of society at large (Cooper et al., 2009:7). Knowledge on attachment can support sensitive parenting, heightened quality of care, and thus secure parent-infant attachment (Cooper et al., 2009:1).

Parenting programmes can enhance parental knowledge and their abilities to become effective parents (Baker, 2014:71). A parenting programme can teach parents strategies that influence their behaviour so that they can avoid the risk factors associated with the development of psychosocial problems in children (Delawarde, Saias & Briffault, 2014:170); in the context of this study, the harmful long-term effects of insecure attachment. As such, a parenting programme is a preventative approach to personal well-being (Delawarde et al., 2014:170). Attachment-based parenting programmes, in which caregivers learn about attachment and the role of sensitive caregiving, play a significant role in promoting infant well-being, thus preventing psychosocial problems later in life (Berlin, Shanahan & Carmody, 2013:81).

As the attachment behaviours of both mothers and infants are influenced by the cultural context in which they live, these aspects have to be considered in parent-child interventions, as well as in the measurement of attachment (Berk, 2013:432; Louw & Louw, 2014:135; Tomlinson, 2001:42; Tomlinson et al., 2005:1044). Professionals working with children and families could benefit from having a culturally sensitive attachment-based parenting programme and formalised measure of attachment accessible to them (Tomlinson, 1997:119).

Although many attachment-based parenting programmes have been presented by mental health professionals in the Western world in the United States and Europe, few have focused on the developing world with diverse socio-cultural contexts (Keller, 2015:187). In South Africa, there are few culturally-based parenting programmes with a focus on observing and understanding attachment and attachment-related disorders at the core, and no standardised measures of attachment to apply in our developing world context (Mercer, 2015:384; Wessels, 2012:98). Professionals could benefit from a more widespread multi-cultural understanding of attachment theory in the South African socio-cultural context compared to using a Western understanding of attachment theory. A deeper understanding of attachment will also assist therapists who work in forensic parent-child reparation and reunification work, as well as those who focus on marriage and couples counselling (Greggo & Becker, 2010:54). Cooper et al. (2009:1044-1045) have done research on infant-parent attachment in a South African community and emphasise the urgent need for parent-child interventions in developing world contexts.

Research in Western countries has demonstrated that attachment-based interventions focusing on sensitive parenting for infants are successful in low-risk families (Egeland, 2009:4). Various attachment-based parenting programmes, using different methods of instruction such as skills training, reflection, reframing and video-feedback, focus on aspects such as reframing parents' internal working model, mother-infant interaction, and positive and sensitive parenting (Alink, Van Zeijl, Mesman, Van Ijendoorn, Bakermans-Kranenburg, Stolk & Koot, 2006:997; Egeland, 2009:4; Gray, 2015:311; Huber et al., 2015:383; Marvin, Cooper, Hoffmann & Powell, 2002:107, 109; Mercer, 2015:382; Van Ijzendoorn, 2007:2).

In the South African context, however, there is limited information and research on the outcomes of current parenting programmes (Baker, 2014:1; Cooper et al., 2009:2; Wessels, 2012:96). This lack of sufficient research and information in a developing world context could ultimately lead to parent-child psychosocial problems not being effectively treated in a South African context (Wessels, 2012:3). As a consequence of the high rates of violence and child maltreatment in South Africa, upscaling the quality of early intervention programmes in South Africa is necessary (Wessels, 2012:3).

Knowledge on attachment and practice strategies can lead to more sensitive parenting, heightened quality of care, and thus more secure parent-infant attachment, thereby preventing psychosocial problems later in life (Berlin et al., 2013:83; Cooper et al., 2009:1; Lee, McCreary, Breitmayer, Kim & Yang, 2013:274). South Africa follows a developmental approach to social welfare service delivery, in which prevention and early intervention, as well as principles such as empowerment and self-reliance are emphasised (Department of Social Development, 2013:10, 29).

The goal of this study was to develop an attachment-based parenting programme taking into account the South African socio-cultural context, and to pilot test the programme by means of a self-developed measuring instrument. The study was based on a mixed methods research approach, with research questions guiding the study (Fouché & Delport, 2011:64).

The research questions for the study were as follows:

- What is the influence of the South African socio-cultural context on maternal caregiving that will support mother-infant attachment?
- What elements should be included in a parenting programme to enhance maternal attachment behaviours within a diverse socio-cultural context?
- What is the influence of socio-cultural factors on the measurement of attachment?

1.3 GOAL AND OBJECTIVES OF THE RESEARCH STUDY

The goal of the study was to develop, implement and pilot test a parenting programme to enhance mother-infant attachment within the South-African socio-cultural context.

The objectives of the study were:

- To contextualise attachment between mothers and their infant children.
- To explore the potential influence of the South African socio-cultural context on caregiving behaviours of mothers that could influence mother-infant attachment.
- To develop a parenting programme to enhance maternal attachment behaviours that will support secure mother-infant attachment with consideration of the South-African socio-cultural context.

- To develop an observation scale for maternal attachment behaviour for utilisation within the South African socio-cultural context.
- To pilot test the parenting programme for mother-infant attachment.
- To explore the experiences of the mother participants of the developed parenting programme.
- To make recommendations in terms of culturally sensitive attachment-based parenting programmes in the South African context.

1.4 RESEARCH METHODOLOGY

The research methods are defined as the techniques that are used to understand and establish relationships between the data and unknown phenomena that assist in solving the research problem (Kothari, 2004:7). In the research methodology, decisions are made with regards to the population and sampling for the study, data collection methods, data analysis and the pilot study, all of which are discussed below.

The research was based on a mixed methods research approach, in which qualitative and quantitative data were collected to obtain a more comprehensive understanding of the phenomenon that were explored (Delport & Fouché, 2011:434). These authors indicate that the most relevant research paradigm for mixed methods studies, is pragmatism. The research paradigm that was thus relevant to the study. Furthermore, the study had an exploratory and descriptive research purpose; the study involved exploring and describing the influence of culture on maternal attachment behaviours (Bless, Higson-Smith & Sithole, 2013:391; Fouché & De Vos, 2011:95-96).

The research was based on applied research, as it focused on a situation in practice, namely the influence of culture on maternal attachment behaviours that could influence mother-infant attachment in the South African context (Fouché & De Vos, 2011:94; Kothari, 2004:5). An attachment-based parenting programme was developed and pilot tested in the study by following the steps involved in intervention research, as a sub-type of applied research (Frazer & Galinsky, 2010:459). Data were collected in two distinct phases. Extensive qualitative data were collected on participants' perceptions on the influence of culture on maternal attachment behaviours. This information informed the development of the parenting programme. Quantitative data was collected for pilot-testing the programme and was complemented by collecting qualitative data from a small sample of participants. Given the sequential data collection in which the first, more dominant phase had to be completed before the second phase, the exploratory mixed methods design was relevant to the study (Bishop, 2014:8; Delport & Fouché, 2011:441).

The first phase of data collection was based on a qualitative research design and involved the exploration of the views of mothers, social workers and psychologists, and experts in the

field of attachment on the possible influence of socio-cultural factors on maternal attachment behaviours. Qualitative data was also collected from a small sample of mothers in the second phase of the study. The collective case study was thus relevant as a qualitative research design (Fouché & Schurink, 2011:322; Nieuwenhuys, 2016:82-83). Quantitative data was the key method of data collection in phase two of the study. Quantitative data was collected from an experimental and a comparison group. The quantitative research design was a quasi-experimental design, namely the comparison group pre-test post-test design (Dimitrov & Rumrill, 2003:159). The purpose of applying this design was to measure maternal attachment behaviours before and after implementing the developed attachment-based parenting programme.

The population of the study consisted of subjects who specifically related to the research problem (Welman et al., 2012:52). In this study, the population for phase 1 were mothers, social workers and psychologist from the main Black ethnic groups residing in Gauteng, namely the Zulu, Xhosa, and Sotho, and on the White, Coloured and Asian populations (Countries Quest, 2015). Study samples were selected by means of purposive sampling, based on certain sampling criteria (Babbie, 2013:128; Bless et al., 2013:172). As the researcher was not familiar with the population for the study, snowball sampling was utilised to recruit the participants for the first phase of the study (Babbie, 2013:129). Three samples were selected, namely experts in the field of attachment (7), professional social workers and psychologists (31), and mothers (31).

The study population for phase 2 of the study were mother-infant dyads attending the pre- and post-natal clinic at the Olivedale Clinic in Johannesburg. Availability sampling (Kothari, 2004:50) were used in addition to purposive sampling. The sample consisted of 18 mothers with infants between the ages of 6 and 18 months, who were recruited with the help of staff members at the clinic and divided into an experimental and comparison group by means of simple random sampling (Babbie, 203:135).

Qualitative data were collected by means of semi-structured interviews with the use of interview schedules that allowed the researcher to obtain in-depth data (Greeff, 2011:352). Separate interviews schedules were developed for the sample of mothers and professional persons respectively in the first phase of the study, and for the mother participants in the second phase of the study. Data was analysed through thematic analysis (Creswell, 2013:183-187). Quantitative data were collected by means of a self-developed observation schedule and were analysed statistically (Delport & Roestenburg, 2011:181; Pietersen & Maree, 2016:208-210). Attention was paid to the data quality of the qualitative findings and reliability of the quantitative data (Delport & Roestenburg, 2011:177-178; Kothari, 2004:20). Before the main study, the respective interview schedules as well as the observation schedule were pilot tested with persons who complied with the sampling criteria, but did not form part of the main study (Bless et al., 2013:148; Strydom, 2011a:240-241). Relevant ethical considerations were upheld throughout the research process.

The limitations of the study were considered by the researcher and noted in the next section.

1.5 LIMITATIONS OF THE STUDY

Although the data collection on the influence of culture on attachment during the first phase of the study was based on a substantive sample (69 participants), the sample size involved in the pilot testing of the programme was too limited to obtain reliable quantitative data.

The researcher found it challenging to recruit a sample for the quantitative data collection that would be representative of the particular cultural groups that were involved in the qualitative data collection. Participants had to commit to attending four programme sessions at the venue (at the medical clinic) as well as two play-sessions together with their infants for the purpose of the pre-test and the post-test.

Rich data were collected during the qualitative phases of the study, however the pilot-testing of the programme did not yield any conclusive findings.

The clinic where participants for the programme and quantitative data collection were recruited predominantly caters for a middle-class socio-economic population. Participants were recruited at the clinic based on availability sampling to ensure that a sufficient sample could be recruited within a specific time period. In this study, the attachment-based programme was presented mainly to participants living in middle-class communities. Of interest, however, was that these participants experienced a lack of knowledge about attachment and optimal maternal attachment behaviours. It was difficult to obtain permission to carry out the study at government clinics that were in lower socio-economic areas. In the following section, the content of the chapters is briefly described.

1.6 CONTENTS OF THE RESEARCH REPORT

The research report is presented as follows:

Chapter 1: Introduction to the research study

In Chapter 1, the researcher provides a general overview of the research topic and methodology, the rationale and problem statement, goal and objectives, and limitations of the research study.

Chapter 2: Theoretical framework

Chapter 2 contains an in-depth review of the theoretical framework underlying the study, namely attachment theory and ecological systems theory.

Chapter 3: Mother-infant attachment

In Chapter 3, mother-infant attachment is conceptualised. Aspects such as the formation of attachment, attachment styles, attachment behaviours, the internal working model, and the effects of attachment are discussed.

Chapter 4: Attachment programmes and measurement of attachment

In this chapter, information on existing attachment programmes and the measurement of attachment behaviours is provided.

Chapter 5: Research methodology

In Chapter 5, the researcher provides a detailed discussion of the research methodology followed in this study.

Chapter 6: Research findings: the influence of culture on attachment

In this chapter, the research findings based on the interviews with the social workers are described according to themes and sub-themes. These findings, together with the literature review, inform the development of the attachment-based parenting programme as well as the measuring instrument that was used to measure mother-infant attachment behaviours in the study.

Chapter 7: Attachment-based parenting programme and measuring instrument

In Chapter 7, the attachment-based parenting programme that was developed by the researcher is described in terms of theory and practice. Furthermore, the development of the measuring instrument for the pre-test and post-test in the study is described.

Chapter 8: **Research findings: the influence of the attachment-based parenting programme**

The empirical findings of the second phase of the research are presented in Chapter 8. The qualitative findings based on the pre-test and post-test data obtained from the observation of the mother-infant attachment behaviour, are presented. The data were supplemented with information obtained from the semi-structured interviews with the programme mothers in the experimental group on their experiences regarding the attachment programme.

Chapter 9: Discussion of the research findings, conclusions and recommendations

This chapter contains an integrated discussion of the qualitative and quantitative research findings. The researcher draws conclusions based on the key findings of the study, and provides recommendations for both practice and research.

The ensuing chapter will contain an overview of the attachment and ecological systems theory which are the theoretical frameworks that underpin the research.

CHAPTER 2

THEORETICAL FRAMEWORK OF THE STUDY

2.1 INTRODUCTION

This chapter provides a detailed description of the theoretical frameworks underlying the study, namely attachment theory and ecological systems theory.[4] The purpose of a theoretical framework is to form a base from which all knowledge is metaphorically and literally put together (Grant & Osanloo, 2014:12). The theoretical framework provides structure and support for the rationale, the problem statement, the purpose and the research questions (Grant & Osanloo, 2014:12). A dissertation study is informed by theory. The theoretical framework provides structure and clarifies the vision for a study, while leading to the organisation and flow of a dissertation, and assists in the process of data analysis and interpretation, as it highlights the important concepts underpinning the study (Grant & Osanloo, 2014:13). In the following section, the first theoretical framework underlying the study, that of the theory of attachment is discussed.

2.2 THE THEORY OF ATTACHMENT

Attachment theory, which has emerged primarily in studies of childhood and in the literature on therapeutic interventions, is concerned with an infant's early attachments to parental figures, and how these patterns of attachment shape behaviour throughout the life course (Keller, 2015:177; Whipple, Bernier & Mageau, 2009:219). In the literature, attachment theory is viewed as a sub-discipline within child development (Siegel & Hatzell, 2003:31).

Attachment can be defined as a powerful emotional connection a person has with significant others which leads to pleasure when interacting with them, and comfort and fulfilment when experiencing their nearness during stressful and traumatic times (Berk, 2013:428; Minde et al., 2006:546). Primary attachment focuses on the emotional bond developing between an infant and main caregiver (usually the mother) through repeated interactions with the same caregiver over time in their dyadic relationship, and in a specific environment that fulfils the infant's needs for attention and comfort (Berk, 2013:428; Weinfield, Stroufe, Byrne & Carlson, 2008:79). Based on these interactions, the infant then begins to anticipate behaviour from a primary caregiver (Weinfield et al., 2008:79). These interactions form the basis for the development of different attachment styles.

[4] In different literature sources, Bronfenbrenner's theory on the contextual influences on human development is referred to as, amongst others, the ecological systems theory (Berk, 2013:26); ecological theory (Louw et al., 2014:29) and bio-ecological model of development (Sigelman & Rider, 2009:7). In this study, Bronfenbrenner's theory will be referred to as the ecological systems theory.

2.2.1 Classic attachment theory

John Bowlby (1969) is regarded as the founder of attachment theory (Berk, 2013:428). There were, however, various perspectives on attachment which informed his theory.

This chapter contains a detailed description of the theoretical frameworks underlying the study, namely attachment theory and ecological systems theory. The purpose of a theoretical framework is to form a base from which all knowledge is metaphorically and literally put together. In this way, the theoretical framework provides structure and support for the rationale, the problem statement, the purpose and the research questions (Grant & Osanloo, 2014:12). The theoretical framework clarifies the vision for a study, while leading to the organisation and flow of a dissertation (Grant & Osanloo, 2014:13). Therefore, the theoretical framework assists in the process of data analysis and interpretation, as it highlights the important concepts underpinning the study.

In this chapter, a review of the origins of the framework underpinning attachment, explaining John Bowlby and Mary Ainsworth's integral contributions to attachment theory, where concepts such as ethology and maternal sensitivity were first defined, is presented (Keller, 2015:177; Whipple et al., 2009:219). When describing the ecological systems theory, the various systems influencing the development of the infant on a psychosocial level, such as the caregiving and family systems as well as the socio-cultural context, are expanded on. In this chapter, Bronfenbrenner's ecological systems theory is described to provide a lens through which the influence of systems on a micro, meso and macro level amidst continuous change (the chronosystem) on the development of attachment between the infant and main caregiver, might be understood (Louw, Louw & Kail, 2014:29; Guckin, Minton & Stephen, 2013:38; Chau-Ying Leu, 2008:18). An in-depth explanation of how the behaviour and development of the infant and main caregiver are affected by systemic interactions within an ever-changing environment is thus provided.

Infant attachment styles are classified into secure or insecure styles of attachment, namely: secure attachment and insecure avoidant, insecure ambivalent and insecure disorganised attachment (Whitcomb, 2012:271). The securely attached infant seeks contact and proximity with her main caregiver, displaying little resistance, insecure avoidant infants avoid their mothers actively, and insecure ambivalent infants show a need for proximity to their mothers but mix this need with some resistant behaviour (Whitcomb, 2012:271). The insecure disorganised infant appears to be detached from the mother, often has a dazed facial expression, and usually displays anger and fear when the mother returns to her (Arnett, 2016:216; Berk, 2013:431). The disorganised infant may avoid her mother despite being extremely distressed when separating from her (Smith, Cowie & Blades, 2011:117).

It is believed that attachment relationships are internalised and have a strong impact on other important relationships later in one's life (Cooper et al., 2009:1). A securely attached infant feels safe in her relationships with significant others, whereas an insecurely attached

infant experiences intensity of emotion, dependency, possible agitation and, later, fears of being rejected in her close attachments to others (Cassibba et al., 2015: 55; Whipple et al., 2009:219).

From a psychological perspective, attachment theory focuses on the extent to which the caregiver-infant relationship provides the infant with protection against emotional harm by means of a nurturing, loving, sensitive relationship between caregiver and infant, leading to secure attachment and positive child outcomes later in life (Keller, 2015:177; Mercer, 2015; 383; O'Connor & Scott, 2007:6; Whipple et al., 2009). The development of attachment theory will be discussed in more detail in the next section.

Sigmund Freud (1916), the founder of psychoanalysis, focused on the importance of the oral stage of development, from birth to the age of 1 year (Funamoto & Rinaldi, 2014:4; Louw et al., 2014:21). Freud's theory was the first theory to emphasise the influence that early parental responses to the child's needs would have on the child's development (Berk, 2013:15). According to the psychoanalytic view on the absence of consistent caregiving, an individual goes through many stages when experiencing the loss of an attachment figure by first denying it, and then hoping and acting in ways to recover the lost person. Anxiety is seen as a reaction to the loss of an attachment figure that is still desperately needed by the infant, or 'the infant in us all' (Ogden, 2014:212). Protests displayed by either the infant or the adult are a desperate attempt to bring the attachment figure back or at least replace the lost person in order to provide protection from all things that are threatening. When the attachment figure never returns the anxiety will eventually dissipate, which leads to pain and mourning, and some may never overcome the pain of the loss of the attachment figure (Klein, 1987:109). Dysfunction arises when there is a long-term inability to form a new relationship with another attachment figure in the adult world. Some individuals recover more functionally and are able to form new relationships (Klein, 1987:109). In functional mourning, feelings need to be fully expressed, understood and broken down, as part of the journey to accept the loss of the loved one. When an individual does not accept the expression of the anguish that is felt, there is dysfunction which is dangerous for the psychological stability of the person. In most forms of depression, the main issue is how difficult it seems for the person to ever find somebody to love again, and to feel safe and cherished in cases where the most integral attachment figure has been lost (Klein, 1987:110).

Initially, psychoanalytic theories considered that an infant develops an attachment with her mother as a consequence of the mother feeding the infant, the pleasure associated with having hunger drives satisfied, and being connected with the mother's presence in positive ways (Keller, 2015:179). These theories have been critiqued as later research performed by Bowlby and Ainsworth demonstrated that infants and children can become attached to parents who have not fed them, and that attachment quality is based rather on proximity and maternal sensitivity (Funamoto & Rinaldi, 2014:4).

Erik Erikson (1933), a neo-Freudian theorist and founder of the psychosocial theory that focussed on psychosocial stages of development, emphasised the importance of trust in the infant's first year of life in the first stage of development trust versus mistrust (Berk, 2013:16; Jennings, 2011:51). In his theory, Erikson indicated that feeding is only one aspect leading to a trusting relationship between mother and child. Children who received sensitive, responsive care gained a sense of trust and confidence in the world as a safe and good place, which leads to the development of the psychological quality of hope (Berk, 2013:16; Jennings, 2011:51; Louw et al., 2014:22).

A later focus on attachment was initially postulated by Rene Spitz (1950) who studied and filmed children left in hospitals and institutions by their parents, and highlighted the effects of emotional deprivation on the development of children (Levy & Orlans, 2014:33; Moore, 2005:370). These studies showed the effects of a lack of mother-infant attachment on orphans. A film named "Grief - A Peril in Infancy" was based on his study on the sadness of infants having no attachment figures (Jennings, 2011:47). The studies conducted by Rene Spitz found that most infants recovered if their mothers returned within three months. However, after this time, infants became apathetic and non-responsive (Levy & Orlans, 2014:33). These studies can be associated with more recent work on neglect and abusive treatment in some orphanages in Eastern Europe (Jennings, 2011:47). Babies were fed with propped bottles and left without sensitive care. Many children were tied to their beds leading to deformities, and some appeared to develop cerebral palsy, rather than only distorted limbs. Emotional deprivation was found to lead to impaired early development in these children (Jennings, 2011:47).

At that time, the focus on animal studies in order to understand the biological drive to attach between mother and infant, was accentuated by the work of Harry Harlow (1958) and was later followed by research conducted by Konrad Lorenz (1971). These researchers used experiments with monkeys and geese respectively to demonstrate the need for comfort and learning from a main attachment figure, which added validity to ethological theories of attachment (Vicedo, 2017:4, Keller, 2015:176). Ethological theory emphasises the adaptive and survival value of behaviour (Louw et al., 2014:1).

Imprinting is said to occur in a specific period of development by the offspring of an organism (Louw et al., 2014:17). It is an innate pattern of learning in which the young follow and become attached instinctually and automatically to a moving object, which is usually the mother, in a critical period early in life (Sigelman & Rider, 2009:407). If the mother is absent over this specific period, but another object similar to the mother is present, the young may imprint on this object instead (Keller, 2015:179). The concept of imprinting suggests that infants are prewired for attachment, but that this process only starts to develop when activated by signals from primary caregivers (Levy & Orlans, 2014:32). Thus, the notion of comfort, proven in earlier research on attachment, was considered

increasingly important in terms of a child's healthy, secure development of self. John Bowlby's attachment theory was influenced by early ethological studies (Berk, 2013:428).

2.2.2 John Bowlby's attachment theory

When considering the formation of Bowlby's attachment theory, it is important to look at the study of ethology (Keller, 2015:179). The study of ethology focuses on understanding and analysing behaviour patterns and how they are modified for adaptation and survival purposes (Berk, 2013:427; Keller, 2015:180). Ethology thus focuses on the evolutionary history of behaviour and informs the principles underlying Bowlby's attachment theory.

Bowlby introduced the concept of ethology in attachment, which sheds light on the **attachment behavioural system** between mother and child (Keller, 2015:179). Ethological theory views development as being biologically programmed (Louw et al., 2014:17-18). Ethology is defined as a species-specific system of behaviours that leads to certain predictable outcomes and, in the context of mother-infant attachment, involves an inherent motivation where the set goal of the infant/child is proximity to the mother (Funamoto & Rinaldi, 2014:4). Bowlby stated that the **attachment behaviours of babies** such as babbling, grasping and crying are built-in signals that encourage the parent to be close to, and look after their baby (Bick & Dozier, 2013:95; Keller, 2015:179). The intention behind keeping the mother near is to ensure the baby's survival by reaching optimal growth through feeding, protection, affection and stimulation (Minde et al., 2006:546). Therefore, certain attachment behaviours develop, namely learning trust and reciprocity, exploring the environment with feelings of safety, self-regulation, touch, eye contact, smiling, positive emotions, need fulfillment and attunement (Levy & Orlans, 2014:16; Sigelman & Rider, 2009:411).

The concept of imprinting that was introduced by ethological studies, resulted in the concept of the critical *period*, which became a significant concept in child development (Berk, 2013:23). The critical period refers to a specific time that allows for the optimal development or certain adaptive behaviours (Arnett, 2016:122; Berk, 2013:23; Louw et al., 2014:17). The concept of a **sensitive period** of development applies to human development as the boundaries are not as well-defined as with the critical period (Berk, 2013:24). The sensitive period influenced Bowlby's theory and is understood as a period of time during which the infant is more susceptible to signals/cues from the caregiver and more likely to attach to the primary caregiver, usually the mother (Mortorell, Papalia & Feldman, 2014:137). Bowlby considered the first two years of life as the sensitive period for the development of attachment (Sigelman & Rider, 2009:407). Based on their caregiving experiences during this period, children form a mental representation of the self, others and their world. This mental representation is referred to as the internal working model.

The **internal working model** is another principle underlying attachment theory (Holmes & Slade, 2018:10-11). The internal working model is based on the child's expectations of the

availability of attachment figures and their ability to provide support during difficult times, as well as on the self-image formed due to the relationship with these figures (Berk, 2013:430; Mingo & Easterbrooks, 2015:471). Although the internal working model is based on preverbal memory and is not in conscious awareness, it has an influence on the individual's expectations of and behaviour in relationships throughout life, including how the individual behaves as a parent in the next generation (Keller, 2015:177; Levy & Orlans, 2014:72). A history of consistent and sensitive care with the parent is necessary in order for a child to develop an internal working model of self and others as reliable, trustworthy and loving (Keller, 2015:177). In this regard, Louw et al. (2014:18) mention that, although the ethological roots of behaviour are biologically based, actual experience is necessary for adaptive behaviours to develop.

Social learning theory played a significant role in the development of attachment theory in that it sheds light on a child's daily experiences and exposures, which directly or indirectly affect and shape a child's behaviour (O'Connor & Scott, 2007:5). Social learning theory focuses on factors within the environment that influence the quality of the parent-infant bond. Traditional behavioural principles of reinforcement and conditioning applied in this theoretical approach, substantiate the attachment theoretical view of reinforced sensitive maternal behaviours leading to a secure attachment. Moment-to-moment interaction between parent and child is considered to be a crucial element: if a child is positively rewarded for her behaviour by means of attention and approval she will repeat that behaviour; if she is ignored or punished she will be less likely to repeat that behaviour (O'Connor & Scott, 2007:5). This element relates to the attachment programme developed and implemented in this study in that the ability of the mothers to learn new ways of positively relating to their infant babies could reinforce maternal sensitivity and create a warm, nurturing and facilitating social environment for the development of mother-infant attachment. The element of maternal sensitivity is highlighted by the work of Mary Ainsworth.

John Bowlby is considered to have formulated the theoretical underpinnings of attachment theory, whereas Ainsworth is considered to be the first to have done empirical, naturalistic clinical work on attachment. Ainsworth, a Canadian developmental psychologist, collaborated closely with Bowlby in the 1950's subsequent to Ainsworth answering an advertisement for a research assistant (Jennings, 2011:49). This point marked the start of their lifelong collaboration, involving research on attachment. Ainsworth observed babies and their caregivers in their natural environments over the two years in which she lived in Uganda; a study that was considered as much needed cross-cultural research at the time (Jennings, 2011:49; Keller, 2015:176).

Mary Ainsworth is known for developing a procedure, the Strange Situation, in the 1960's to assess the quality of attachment between a caregiver and child (Berk, 2013:430; Jennings, 2011:49). Based on these observational protocols, she described different attachment

patterns in children, namely secure, insecure and non-attached infants, and concluded that **maternal sensitivity** is a crucial determinant of attachment quality (Bick & Dozier, 2013:95; Keller, 2015:176). The Strange Situation Procedure (SSP), which shall be discussed in more detail in Chapter 4, observes a child's reaction to the mother separating from and reuniting with her child in a room during a play session, while a stranger enters the room and increases the child's distress levels (Jennings, 2011:49). Ainsworth's above-mentioned classification suggests that the quality of care provided to the infant/child by the caregiver in terms of sensitivity and responsiveness, will lead to secure (optimal) or insecure (non-optimal) attachment (Berk, 2013:429; Mercer, 2015:383).

The ability of the caregiver to respond to the infant's signals in an accurate and timely manner, is referred to as **attunement** (Booth & Lindaman, 2010:68; Levy & Orlans, 2014:16; Mingo & Easterbrooks, 2015:471). Caregivers who are sensitive to the cues of the infant and respond consistently to the infant's needs, contribute to the development of secure attachment, while caregivers who reject the child, are unavailable, irritable, abusive or neglectful of the child, and who have little physical contact with the infant, show little affection, and do not respond timeously to the signals of the infant, are likely to contribute to insecure attachment of the infant (Sigelman & Rider, 2009:195-196).

Ainsworth's research introduced another key principle in attachment theory, namely that of the **secure base**, and the balance between exploration and seeking safety (Holmes & Slade, 2018:8). This principle implies that the infant will use a familiar caregiver as a point from which to explore the environment, and return to the caregiver for emotional support (Berk, 2013:408). The familiar caregiver thus serves as a secure base for the child and provides the child with a sense of safety and security (Levy & Orlans, 2014:330).

It is useful to discuss Winnicott's understanding of the mother-infant bond at this point. Winnicott (1969), a Freudian psychoanalyst, introduced the concept of 'good enough' mothering, referring to the facilitating environment between mother and infant, where the mother supplies an auxiliary ego function assisting the infant in protecting herself from primitive agonies when she has not yet separated herself from the mother (Ogden, 2014:210). According to Winnicott (1969), these primitive agonies occur as a result of the absence of a good enough mother (Ogden, 2014:210). A 'good enough' mother is able to hold, touch, caress and respond to her infant in a way that facilitates her infant to regulate the infant's internal state of arousal and develop a sense of self (Mäkelä, 2003 in Booth & Lindaman, 2010:68; Ogdon, 2014:210). The infant outside of the mother-infant bond is unintegrated, leaving certain feelings (primitive agonies) intolerable for the infant without the mother, when having to experience them on her own. In an attempt to protect herself from these unbearable states, the infant must learn to defend herself by means of 'self-holding', thus holding herself together in the absence of her mother (Ogden, 2014:211). This protective defence by the infant, must be developed to prevent a fear of breakdown in later life (Ogden, 2014:212). Jennings (2011:47, 134) state that the term 'good enough mother'

challenges the perception that mothers are to blame for unhealthy emotional development of their children, and lower mothers' feelings of incompetence for not being perfect parents.

Critics of classic attachment theory have focused on a child's inner resilience to overcome a lack of sensitive parenting in the early stages of development. By the 1970's, prominent child psychologists were critiquing classic attachment theory for being atomistic and reductionistic (Vicedo, 2017:5). This criticism pointed out that mother and child attachment was reduced to two separate units only affected by each other, in isolation. The argument at the time was that the child was not understood as part of a complex system of relationships and network of influences (Vicedo, 2017:6).

Margaret Mead conducted research in non-Western societies and demonstrated that Bowlby's attachment theory did not consider a wide enough diversity of attachment behaviours (Tomlinson, 1997:119; Vicedo, 2017:2). Ethnographic studies have revealed a diversity of child rearing patterns across the world. After Ainsworth's studies in Uganda, classic attachment theory grew out of research carried out by psychologists in laboratory type conditions. The laboratory type conditions were regarded as not conducive to most of the developing world (Keller, 2015:176; Vicedo, 2017:2). Mother-infant attachment was therefore initially studied separately from their socio-cultural contexts. As a consequence of rich ethnographic research, there has been criticism of Bowlby's ethological theory of attachment behaviours and the use of a clinical, laboratory setting over a naturalistic setting to study human behaviour (Keller, 2015:177; Vicedo, 2017:2). These are important facts to consider in light of this study where attachment is explored through a cultural lens in a South African socio-cultural context (Tomlinson, 1997:118). Recent studies highlight that there is insufficient cross-cultural research in therapy and child development, despite Western theorists stating their Western models to be universally applicable cross culturally (Jennings, 2011:49; Keller, 2015:187).

As a consequence of the above-mentioned shortcomings of classic attachment theory, modern attachment theory has over the years expanded into different domains (Keller, 2015:177). The first domain is the intergenerational transmission of attachment, proposing that attachment is transmitted from one generation to the next. The second domain relates to a new organisational approach towards attachment and human relationships in general. The third domain focuses on attachment and its effects on neurobiology, proposing that sensitive attachment and bonding stimulate development of the right hemisphere of the brain, which leads to enhanced development later in life. The fourth domain explores the clinical applications of attachment theory with regards to psychopathology, which propose that the development of a secure base within the child leads to less psychopathology throughout life (Keller, 2015:177). In the context of this study, the neurobiologcial effects of attachment places emphasis on the importance of optimal mother-infant attachment for all children, regardless of the social context.

Early attachment experiences have been found to shape the development of the brain (Booth & Lindaman, 2010:62). Levy and Orlans (2014:93, 121) emphasise that the attachment relationship plays a primary role in shaping the development of the brain and the connections between different parts of the brain. Modern attachment studies have found that the developing brain changes at the stage when the development of a clear-cut attachment relationship begins, between the age of six to twelve months (Berk, 2013:429; Cozolino, 2010:58-59; Wake, 2010:77).

The layers of the brain are connected, and are related and dependent on each other (Wake, 2010:82). The brain is described as a three-part system, which show evolutionary connections to reptiles and lower mammals. Each layer of the brain is responsible for increasingly complex abilities and functions (Jennings, 2011:34). The concept of the triune brain was developed by Paul MacLean (1978), describing the hierarchy of the three parts of the brain (Levy & Orlans, 2014:47). The brain stem, which is the instinctual (reptilian) brain stores inherited and acquired fears (Jennings, 2011:34). This part of the brain regulates automatic behaviours such as breathing, swallowing, heart rate, blood pressure and sleeping, as well as imitative behaviours and stress responses (Levy & Orlans, 2014:47).The next level, the limbic system or emotional (mammalian) brain, is focused on nurturing and feeding, as well as on the experience and expression of emotions, and is the part of the brain that can be linked to attachment (Jennings, 2011:34; Levy & Orlans, 2014:47). Finally, the higher brain, the neo-cortex or cerebral cortex, is concerned with higher-order thinking, planning, reasoning, attention, problem-solving, awareness of internal emotional states and rationalising, and deals with conscious experiences (Berk, 2013:186; Jennings, 2011:35; Levy & Orlans, 2014:48). Levy and Orlans (2014:49) note that the layers of the triune brain develop sequentially; implying that the brain stem and limbic brain serve as the foundation for the development of the neocortex.

Berk (2013:185) explains that brain growth is basically concerned with the development of neurons, or nerve cells, and the intricate communication system between neurons. The structure that permits a nerve cell to pass an electrical or chemical signal to another neuron, is called the synapse. Neurons release chemicals called neurotransmitters that allow messages from one neuron to cross the synapse to the next neuron. When neurons are stimulated by input from the environment, they establish elaborate synaptic connections with other neurons (Berk, 2013:185). Increased synaptic growth to the prefrontal cortex of infants between six to twelve months of age supports the assumption that a clear-cut attachment bond between caregiver and infant begins to develop at six months (Jennings, 2011:35). This increased synaptic growth is enabled through the infant's response to positive facial stimuli from the caregiver (Wake, 2010:82). In response to such positive stimuli, the infant experiences pleasurable sensations, leading her to seek out such pleasurable stimuli, whereby a stronger attachment bond is formed between mother and child (Wake, 2010:82). Pleasurable stimuli such as touch and nurturing sensation between mother and infant lead to biochemicals such as oxytocin, prolactin and endorphins being

secreted, creating positive and warm feelings and enhancing healthy development of the infant (Jennings, 2011:135).

Further research has suggested that non-verbal communication and the imitation of positive facial expressions enables the right brain to communicate with the left brain, which leads to positive regulation by the right hemisphere of the brain (Wake, 2010:82). The development of the right brain is significant in order to develop the ability to self-regulate and to maintain continued mental stability (Booth & Lindaman, 2010:62). It is important to note that the right brain is responsible for the regulation of sympathetic and parasympathetic responses (Wake, 2010:82). This area of attachment theory that focuses on the biological aspects of the brain and how attachment supports brain development has assisted clinical practice aimed at enhancing mother-infant attachment (Booth & Lindaman, 2010:62). Therefore, the neurodevelopmental theory of attachment provides a more holistic understanding of attachment and supports the premise that interventions to enhance attachment can lead to changes in the brain, with positive effects on the ability to regulate emotions and to mental health (Booth & Lindaman, 2010:62; Jennings, 2011:134). Thus, heightened responsive and sensitive care facilitates the development of the brain, leading to future cognitive and social development of the infant and child.

In conclusion, attachment theory is an essential theory underpinning this study. It emphasises the importance of the quality of the caregiver-infant emotional bond, and the reverberating effects of attachment on the infant and society over time. The latest expansions on attachment theory, such as neurobiology, also need to be considered for this study. Criticism against attachment theory in terms of cross-cultural differences in caregiving, need to be considered in a study on attachment in the multi-cultural South African context. Therefore, the ecological systems theory that focuses on contextual influences on children's development (Berk, 2013:26) is regarded as a second theoretical framework appropriate to this study. In the context of this study, the ecological systems theory could shed light on the different systems in the environment and how they affect attachment behaviours between mother and infant.

Ecosystemic theory focuses on the principle that every system in the environment affects every other part of another system (Kondrat, 2002:435). In this theory, various larger systems and sub-systems such as individuals, families and organisations, and how they interrelate and function, are analysed and differentiated (Kondrat, 2002:435). Each individual exists as a system, and then exists within the family and the community, and so on (Kondrat, 2002:437; Mc Guckin & Minton, 2014:37). A family system can, for example, be broken down into spousal, parental and sibling sub-systems.

A system is not defined as a thing but more as a process of connecting to others and making meaning out of these connections (Hedges, 2005:48). It is thus not possible to predict how long and in what way a system will function, as the system is never static (Mc Guckin & Minton, 2014:37). Therefore, different systems need to be considered when studying

mother-infant attachment, taking into account that these systems have an influence as every system functions according to different meanings they assign to interactions with others (Hedges, 2005:47).

Systems try to maintain a balance (homeostasis), and resist radical change (Kondrat, 2002:438). A system must maintain itself, its organisation and balance in order to continue to exist, otherwise entropy can occur, which is where a system becomes disorganised and fragmented (Kondrat, 2002:435). In order to interact meaningfully with one another, each system and sub-system needs to maintain a sense of identity and organisation within itself.

According to ecosystemic theory, a good fit between human beings and their social and physical environment is necessary (Kondrat, 2002:438). However, one must keep in mind that not all systems are compatible. Some may become incompatible as they are changing and developing, and are thus unpredictable (McGuckin & Minton, 2014:38). A good fit also implies an individual's ability to be reflexive and monitor one's social behaviour in order to lead to more skilled social behaviour (Kondrat, 2002:442). A basic tenet of ecosystemic theory is human freedom as a result of the ability to monitor the conditions and consequences of their actions, which then leads to a better fit between systems (Kondrat, 2002:443). Certain constraints such as limitations of knowledge and inequalities of power will however limit an individual's freedom for change. The transactions between people and the larger environment should lead to a mutuality of influence among systems of different sizes (Kondrat, 2002:438).

The ecosystemic approach focuses on the different layers of the environment and adaptation to them (Blumer, Herlein & Fife, 2012:73; Kondrat, 2002:438). From an ecosystemic perspective, there is a relationship between micro and macro systems, which is described as a mutual influence among systems of various sizes, from which the concepts of boundary and interface arise (Kondrat, 2002:438; McGuckin & Minton, 2014:38). The boundary is the point separating one system from the next, and the interface occurs where one system overlaps onto another system in the environment. The basic tenet of this theoretical approach is that biological, social, psychological, economic, spiritual and cultural factors all play a role and should be analysed when working with the development and the behaviour of human beings (Blumer et al., 2012:73). Thus, in order to understand parent-infant attachment behaviour one needs to consider all systems within the environment within which the infant is raised and understand how such systems interact and might influence attachment styles within the infant.

Urie Bronfenbrenner, an American psychologist, explains child development as a process occurring in a series of interactive and complex systems that are multi-layered and inter-connected (Chau-Ying Leu, 2008:18; Guckin et al., 2013:38; Louw et al., 2014:29). Bronfenbrenner's model can be graphically represented as levels of the environment depicted as rings surrounding the developing child. The rings are arranged according to the systems that are closer and that have the greatest impact on the child, to those with which

the child does not have direct contact but that still affect the developing child: the micro, meso, exo, macro and chronosystems (Chau-Ying Leu, 2008:18; McGuckin et al., 2013:38). Each of these systems have protective or risk factors which lead to either positive or negative outcomes for the child. The ecological systems theory is thus underpinned by the understanding that a child's development is affected not only by her immediate environment and personal characteristics, but also by how these affect the child's interaction with the wider environment (Amoateng & Kalule-Sabiti, 2013:133; Chau-Ying Leu, 2008:17).

In recent times, Bronfenbrenner's theory has been renamed the bio-ecological systems theory, as it also refers to biological and genetic aspects of a person and to the personal characteristics individuals bring with them into a social situation (Amoateng & Kalule-Sabiti, 2013:133). Bronfenbrenner named these characteristics demand, resource and force characteristics (Amoateng & Kalule-Sabiti, 2013:133). *Demand characteristics* are those characteristics that are an immediate stimulus to another person such as age, gender and physical appearance (Amoateng & Kalule-Sabiti, 2013:133). These characteristics may have an influence on initial interactions because of expectations that are formed. In terms of attachment, factors such as the physical appearance, disability and age of an infant could have an effect on mother-infant attachment (Kennedy et al., 2014:289). *Resource characteristics* relate partly to mental and emotional resources such as past experiences, skills and intelligence and also to social and material resources such as sensitive parents, access to good food and housing, and appropriate education for that society. In the context of attachment, the main caregiver's personal internal characteristics and ability to self-regulate emotions and cope with past experiences, leading to the provision of a certain quality of environment and care for the infant, play an important role (Lee et al., 2013:266). *Force characteristics* focus on temperament, motivation and persistence of both infant and mother in enhancing the attachment process. The individual temperament of mother and infant have been found to play a role in the degree of sensitivity a mother is able to provide (Amoateng & Kalule-Sabiti, 2013:133). These characteristics highlight an important aspect of the ecological systems theory, namely that of the reciprocal influence between individuals and other persons and systems that stem from their interactions (Hepworth, Rooney, Dewberry Rooney, Strom-Gottfried & Larsen, 2006:17).

Microsystems increase in size as the child develops, and the initial family may grow in size. Microsystems have an impact on child development, because when they are positive, the child will develop more optimally (Berk, 2013:29). Micro-level practices directly affect child rearing and parenting practices and parent-child relations, and involve the individual's internal physiological, physical, intellectual, psychological and emotional factors (Algood et al., 2013:128). In terms of attachment, consistent and sensitive care in the microsystem will assist in the formation of a secure attachment (Kennedy et al., 2014:288).

This study, which is focused on mother-infant attachment, is focused primarily on the child and mother in the micro-system and the mother's attachment behaviours towards the child. Within the microsystem, the bidirectional influence of relationships needs to be recognised. Thus, not only do parents affect the behaviour of the child, but the child also affects the behaviour of the parents (Berk, 2013:27). Attachment theory links with the concept of bi-directional influence in terms of the innate attachment behaviours of the child to gain closeness to the mother/caregiver, and the nature of the response of the mother/caregiver (Kennedy et al., 2014:288), whether positive or negative. The concept of attunement, as discussed earlier, describes these mutual behaviours that are supportive of secure attachment. In the study, consideration is also given to the effects of multiple caregiving environments, common in South Africa, and the possible influence thereof on attachment (Tomlinson, 1997:118).

These contextual social factors have an impact on maternal behaviours and also on maternal depression affecting maternal sensitivity (Aspoas & Amod, 2014:583). A study conducted in 1999 in Khayelitsha (Western Cape) revealed that maternal depression in a peri-urban South African settlement was three times higher than in Britain (Aspoas & Amod, 2014:583). This places South African infants at a higher risk of insecure attachment. Recent studies in South Africa have demonstrated that South African women in peri-urban settings are also at risk of developing ante-natal depression (Aspoas & Amod, 2014:583).

Culture has been known to affect parenting practices, which is important in the context of this study (Tomlinson, 1997:42). Bronfenbrenner was of the opinion that one must do more than just observe human behaviour to understand human development, and that human behaviour should be assessed and measured considering unique contextual and cultural aspects of that specific time (Berk, 2013:30). There are ongoing reciprocal periods of development between an individual and the environment across an individual's lifespan from birth to adulthood (McGuckin et al., 2013:39). Louw et al. (2014:29-30) indicate that, although an indirect influence, the macrosystem still has an important influence on the child's development.

Social contexts change with time, leading to every generation of children growing up in a specific chronosystem as a result of the influences of socio-historical occurrences and changes of that era such as revolution, economic recession, war, or technological changes (McGuckin et al., 2013:39). As explained by Bronfenbrenner, the chronosystem implies that a child's environment is consistently changing on a social level (death, divorce, relocation, school) and physiological level which is impacted by developmental stage (Berk, 2013:30). Practitioners must be aware of a dual focus, analysing both personal and external factors which influence behaviour and development. The focus on the chronosystem lends itself to professionals' wider responsibilities towards social issues over time such as structural inequalities, disadvantage, and oppression and injustice, all affecting the overall well-being of individuals (Algood et al., 2013:130).

The ecological systems theory is the second theoretical framework for this study. As described in this chapter, ecological systems theory highlights that the caregiver and infant do not exist in isolation but are strongly affected both behaviourally and developmentally by systems within the environment. Ecosystemic theory provides a holistic picture of the context of children's development, and considers effects of the infant and caregiver's biological, social, psychological and cultural factors, intertwining to shape the individual.

Laboratory experiments conducted by Harry Harlow (1958) supported the notion that mother-infant attachment is not based on feeding the infant. Harlow conducted experiments with rhesus monkeys reared by surrogate mothers made either from terry cloth or wire mesh and found that the baby monkeys preferred the terry cloth mother when distressed, even though the wire-mesh mother held a bottle for feeding (Berk, 213:428). Harlow's experiments proved that it is not the feeding of the baby that is most important in the baby's healthy development, as most psychoanalysts believed, but rather the comfort and nurturing provided by the caregiver (Jennings, 2011:51).

Konrad Lorenz (1971) found in his studies that bonding behaviour instinctively develops between young birds and mammals, which was not relating to their feeding but to their imprinting on the mother, based on certain cues or signals available from her (Levy & Orlans, 2014:32). The concept of imprinting is derived from ethology and arose from watching animal species in their natural habitats (Berk, 2013:428). Experiments conducted by Konrad Lorenz demonstrate how goslings stay close to the mother to be fed by her and protected from any danger. When the goose eggs were hatched in an incubator and Lorenz was the first moving object observed by the goslings, they followed and imprinted on him as a replacement (Louw et al., 2014:17; Vicedo, 2017:4).

John Bowlby (1969) thought of attachment theory as an understanding of the nature, importance and function of an infant's connection to her main attachment figures (Berk, 2013:428). Bowlby had a difficult childhood himself in that he lost a beloved nanny at four years of age and was sent to boarding school by the age of seven (Berk, 2013:428, Jennings, 2011:48). Bowlby was sceptical of the prevailing psychoanalytic view of a child, which focused dominantly on the internal world but not much on actual events in a child's life, and he observed that separation from the mother resulted in protest, detachment and despair (Holmes & Slade, 2018:7; Jennings, 2011:48). Although Bowlby's theory initially focused on children in severely deprived, compromised and disrupted caregiving arrangements (refugee children or those in hospitals or residential nurseries), his theoretical perspective on attachment has been applied as a model for the social and emotional development of the child, making it appropriate for this study (Jennings, 2011:48).

Bowlby's theory holds the understanding that human beings have an innate, instinctual ability from birth to attach to significant others with the aim of survival, which serves an important role in the initial development and lifespan of the human being (Reuther,

2014:101). Infants are considered to be biologically predisposed to use the main caregiver as a place of safety when exploring a new environment (Weinfield et al., 2008:79).

Mary Ainsworth's work provided empirical support for Bowlby's attachment theory through her classification of attachment styles which, however, disregarded the socio-cultural influences on attachment responses (Keller, 2015:176; Vicedo, 2017:5). In 1970, the Strange Situation was put forward as a tool that illustrates children's attachment and exploratory behaviours in a laboratory environment (Vicedo, 2017:5). At the time, there was much controversy and many negative reactions about Bowlby's assertion that mothers were responsible for all unhealthy emotional development in children, as well as much criticism of Harlow's cruel experiments with laboratory animals to confirm this fact (Jennings, 2011:47).

There is no doubt concerning the relevance of John Bowlby's work to the importance of mother-infant attachment (Holmes & Slade, 2018: 5-7; Jennings, 2011:47). However, attachment theory has also received criticism.

2.2.3 Criticism of classic attachment theory

Mead criticised classic attachment theory's construct of the mother being the most important single factor in the infant's life, and believed instead that the child's character is formed as a result of the whole environment surrounding the child (Vicedo, 2017:3). The damaging effects of the separations from the mother were believed to be exaggerated, and Mead stated there is insufficient ethnographic evidence proving the essential need for a monolithic relationship between mother and child (Vicedo, 2017:3). Many cross-cultural studies have proven that psychosocial adjustment is optimally facilitated when there are several warm and responsive caregivers; a factor that indicates that caregivers' sensitivity and consistency of care are more important than their number (Vicedo, 2017:3).

On the contrary, Bowlby's main tenet was a belief that the biological, innate connection between mother and child leads to a secure base of self of the child, and to healthy psychological development (Keller, 2015:176; Robinson, 2007:24; Vicedo, 2017:3). Bowlby seemed to disregard the effects of culture and the results of ethnographic research at the time (Vicedo, 2017:4) Margeret Mead conducted studies in Somoa demonstrating that children raised in multiple caregiving environments which were sensitive, responsive and safe still grew up to be happy and well-adjusted (Vicedo, 2017:4). Mead suggested that more thorough cross-cultural and inter-disciplinary studies should be conducted to represent the great diversity in child rearing practices, beliefs, and values found in many non-Western societies across the world (Robinson, 2007:25; Vicedo, 2017:4). These reflections are relevant to this study, as multiple caregiving, which is common in South Africa, might affect the attachment behaviours of the infant and mother (Tomlinson, 1997:118). Adopting a lens of single mother-infant care might not reflect everyday practices across most of the developing world (Keller, 2015:180).

2.3 ECOLOGICAL SYSTEMS THEORY

Meanings of interactions are specific to different systems, and it must be considered that every mother-infant dyad will have unique contexts and stories (Hedges, 2005:48). Each mother-infant dyad has a story about their identity, family, culture, ethnicity, race, religion and gender operating within a system. At the same time, different contexts in different systems will affect each dyad. According to attachment theory, it is important to look at historical attachments and how that system affects the mothering of the infant in the current system (Keller, 2015:177).

The ecosystems approach ties in well with the social work perspective. Social workers focus on people within the system where they live and other systems affecting them, and on understanding their clients socially as human beings from a person-centred angle (Hale & Frusha, 2016:14). Human development cannot be separated from the environment, and therefore cannot be studied in isolation. In this study, the interrelatedness of the different systems that can influence the development of attachment will be interpreted through the perspective of ecological systems theory.

2.3.1 The ecological systems theory of Urie Bronfenbrenner

In the next section, a description of Bronfenbrenner's division of the environment into four levels, namely the micro, meso, exo and macrosystem, as well as the concept of change that is indicated in the chronosystem, is provided.

2.3.1.1 The microsystem

The microsystem involves the child and those people in her immediate environment who are emotionally and physically closest to the infant such as the immediate family, school or day-care (Algood, Harris & Sung Hong, 2013:128). Interpersonal contact at this stage of life is mostly face-to-face and the relationships are mostly dyadic (Chau-Ying Leu, 2008:18; McGuckin et al., 2013:38). The microsystem thus involves those environments with which the child is in direct contact.

Infants have been found to be more secure and socially competent when they have the social support system of a nurturing family network within close proximity (Mc Guckin & Minton, 2014:37). Warm, nurturing and sensitive support within the micro-system offers other positive attachments in the immediate environment, which facilitates inner resilience and security. Experiences that involve and affect one individual will impact another individual in the microsystem, such as a marital relationship affecting caregiver-child relations (Algood et al., 2013:129; Berk, 2013:27). Furthermore, individuals' internal representations of their relationship with their main attachment figures will influence their interactions in outer environmental systems, as they become triggered by external events or their own emotional and/or physical state is affected by their interactions with others

(Chau-Ying Leu, 2008:18). This influence demonstrates the relevance of the ecological systems theory to attachment.

In the microsystem, there is a constant reciprocal interaction between the infant and mother/caregiver and others in the infant's immediate environment and this leads to understanding how they each, in turn, influence each other's behaviour. Attachment theory proposes that the quality of this reciprocal interaction is what leads to a secure/insecure attachment style between infant and caregiver.

2.3.1.2 The mesosystem

The mesosystem involves connections between microsystems, e.g. parental involvement in the child's school situation or day-care centre (Berk, 2013:27). One microsystem has an impact on the next microsystem (Chau-Ying Leu, 2008:21; Louw et al., 2014:29). In terms of attachment, the child with insecure attachment, based on caregiving in the microsystem of the family, is more likely to experience problems in other microsystems, for example related to peers and academic performance.

The infant's development will be affected by how strong and diverse the connections are between the microsystems, the frequency and quality of the interface between these systems, as well as the levels of communication between the agents of socialisation within them (McGuckin et al., 2013:38). Findings have shown that the ability of a dyad in the microsystem (such as a mother-infant dyad) to serve as an effective context for human development is largely dependent on the involvement of third parties (Chau-Ying Leu, 2008:21). Research has demonstrated how important parties in the different microsystems are as a form of social support for the biological mother (Keller, 2015:182). When third parties are absent or play a negative, detrimental rather than a supportive role, the developmental process is halted (Chau-Ying Leu, 2008:21). Berk (2013:27-28) indicates that families living in affluent neighbourhoods usually have 'strong' other microsystems such as quality schools and enrichment activities, that can support parents in enhancing the child's development. The author indicates that, on the other hand, obstacles such as poverty, parental stress and a lack of neighbourhood resources, can negatively affect the child and family.

2.3.1.3 The exosystem

The exosystem refers to settings that the child does not experience directly such as formal institutions and the wider ecology of the parent's work environment, media and religious institutions, but that still have an impact on the child (Berk, 2013:29; Chau-Ying Leu, 2008:21; McGuckin et al., 2013:38). The exosystem refers to the linkage or interconnection between the micro and mesosystems. Interconnecting factors refer to events or incidents that may occur in the exosystem and that will have an indirect effect on parent-infant behaviour, such as parenting programmes, training for early childhood teachers or

community-based resources (Berk, 2013:29; Chau-Ying Leu, 2008:21; Mc Guckin et al., 2013:38). If a parent loses a job, for example, this will have a direct affect on parent-infant/child behaviour and the entire family system.

In addition, there are informal institutions in the exosystem that may influence a child such as social networks, friends and extended family who support parents, thus aiding the child's positive development (Berk, 2013:29). The ecology of human development must be considered in realising that interactions between different systems are central to this approach to development (Belsky & Fearon, 2008:310). If, for example, parents find their work environment positive, stimulating, encouraging and supportive, they will be less depressed and more sensitive to their infant baby. Research has demonstrated that a child's emotional relationships in the home are influenced by how much their parents enjoy their work (McGuckin et al., 2013:39). These examples emphasise the regulating influences between systems, in which systems have a moderating effect on one another (Belsky & Fearon, 2008:310). These influences can serve as a buffer and protect parents from the wider effects within the exosystem. Likewise, negative environmental factors can place stress on parents.

An example of the exosystem can be seen in the Head Start programme (McGuckin et al., 2013:39). This programme was implemented to alleviate the cycle of poverty by supporting a child's physical and intellectual development through healthcare and nutritional programmes (Guckin et al., 2013:39). The results showed improved academic achievement and other benefits for children from various racial and ethnic groups (Guckin et al., 2013:39).

When considering the South African context, there are socio-economic factors in the exosystem which have been proven to have an effect on maternal sensitivity towards infants (Bain, 2014:593). Extreme poverty is a contextual factor that has a influence on maternal depression, infant mortality rates, educational achievement and growth rates (Bain, 2014:593). HIV/Aids and homelessness are serious social problems that result in many children being orphaned and women being uneducated and unemployed (Aspoas & Amod, 2014:584; Tomlinson, Cooper & Murray, 2005:1052). Crime is a problem in South African society as it leads to trauma which affects attachment behaviours. There are high levels of violence, rape, physical and sexual abuse in South Africa, as well as power imbalances between men and women having an impact on maternal behaviours (Aspoas & Amod, 2014:584). Women are unable to protect themselves, leading to high rates of unwanted pregnancies in the country (Aspoas & Amod, 2014:584; Tomlinson et al., 2005:1052).

2.3.1.4 The macrosystem

Bronfenbrenner introduced the macrosystem which involves all the cultures and subcultures, laws, and customs with unique value systems and ideologies, in which the microsystem, mesosystem and exosystem are intertwined, and which develop over time

(Berk, 2013:28,30; Chau-Ying Leu, 2008:22). The macrosystem focuses on the larger context of the ecology of human development that affects a child's development (Chau-Ying Leu, 2008:22). The macrosystem is mostly viewed as the socio-cultural context in which the individual is embedded, and therefore focuses on the society and its values, laws and customs (Algood et al., 2013:130). Examples of the wider context are cultural variations and racial and ethnic differences in the health care delivery system (Algood et al., 2013:130). The macrosystem can also consist of environments where no time is spent by the individual, as both parent and infant can be affected by social, cultural and/or political influences from a system (McGuckin et al., 2013:39). On a more general ecological and ecosystemic level, the macrosystem considers the transformation and change based on core moral values of self-awareness, peace and compassion for humanity, as well as all living organisms and mankind's mutual responsibility to the larger environment (Sheafor et al., 2006:94).

In this study, the focus was on the possible influence of culture on the development of attachment. The effects of culture on parenting practices and beliefs, as indicated by authors such as Tomlinson (1997) and Robinson (2007) demonstrate that no system exists in isolation as there are overlapping effects from one system to the next. As part of the macrosystem, i.e. the outermost level of Bronfenbrenner's model (Berk, 2013:28), socio-cultural aspects can influence all other systems embedded in this system. Bronfenbrenner indicated that systems change over time, either due to social and historical changes, or to children's development process (Louw et al., 2014:30). He referred to these changes as the chronosystem.

2.3.1.5 The chronosystem

The chronosystem refers to the historical context and lifetime experiences of people that influence their development (Berk, 2013:30). Therefore, children's development is influenced by specific events that they have been exposed to in their daily lives, as well as how these events change over time.

With regards to the chronosystem and parental attachment practices over time, one needs to consider generational change. A generation lasts for twenty years and is formed by important events in a country (Codrington, 2008:2). Changes between generations are named generational changes (Codrington, 2008:2). In South Africa, there are generational changes with regards to child rearing due to urbanisation and modernisation, and a diffusion of culture and questioning of traditional child rearing ideas by urban mothers towards their traditional, rural grandmothers (Minde et al., 2006:555). Acculturation, involving a process where an individual's original culture is mixed with a new culture within which one lives, is therefore important under the contextual changes of the chronosystem (Teske & Nelson, 2006:352). Generational changes in the chronosystem therefore focus on changes over time between generations affecting mothers and how they are raising their infant babies in different South African cultures. Attachment is, however, also inter-

generational, transferred from one generation to the next (Amoateng & Kalule-Sabiti, 2013:133).

Bronfenbrenner's theoretical understanding is thus pertinent to this study when taking cultural and socio-economic changes into account. Bronfenbrenner's ecological systems theory is praised for being open and holistic, allowing for a rich understanding of the contextual issues affecting individual behaviour and development, thereby making it possible for practitioners to intervene on a number of levels (Algood et al., 2013:130).

The German philosopher, Martin Heidegger (1889-1976), describes a person's existence as an intertwined activity that occurs through one's immersion in socio-cultural practices, which happens by means of one's practical interaction with others (Reuther, 2014:102). Heidegger was of the opinion that as people become absorbed into society, they take on certain ways of being in this world that are possible by means of their own socio-cultural times and situation (Reuther, 2014:102). Heidegger's social ontology refers to the influences of the chrono and macrosystem on one's attachment to others, as described by Bronfenbrenner. Heidegger was of the opinion that an individual must be understood in the context he/she lives, as a process-orientated whole with meaning, which relates to the ecosystemic viewpoint towards attachment (Reuther, 2014:103). Heidegger states that people's self-identities are formed through the societies and cultures in which they live. An integration of the different contexts occurs when individuals come together (Reuther, 2014:103).

Bronfenbrenner's ecological systems theory is, however, criticised for placing too much of an emphasis on interactions between the person and the environment, and too little on the biological characteristics of an individual and their effects on behaviour and development (Algood et al., 2013:130). The theory is criticised for being too complicated and over-inclusive, incorporating all the contextual factors to the extent of overlooking important individual factors. In this regard, Louw et al. (2014:10-12) points to the nature-nurture debate, where it is generally accepted that heredity in interaction with environmental factors such as parenting styles and the physical environment in which a child grows up, will shape the unique developmental pathway of a child. The authors state that "heredity sets the limits and the environment determines to what extent a specific characteristic will develop between these limits" (Louw et al., 2014:12).

With regards to ecological systems theory and attachment, this study focuses on the infant's internal system and the caregiving system. The caregiving system has been said to be made up of two different components: firstly, the infant and the main caregivers (mother, father, grandparents, guardians) providing a component of physical protection, and secondly the component of providing psychological protection leading to security, autonomy, self-sufficiency, exploration and good interaction with one's peers (Chau-Ying Leu, 2008:17-18; Mc Guckin & Minton, 2014:37). This system is fully functional throughout adolescence until early adulthood and in a dispersed fashion throughout life.

Links have been found in research between initial mother-infant attachment and children's externalising and internalising behaviours within other systems, such as educators (O'Connor, Collins & Supplee, 2012:265). Externalising behaviours are described as activity, impulsivity or aggression, and internalising behaviours as depression and social withdrawal. Early attachment has been shown to affect a child's connection with other systems within which it functions, where insecurely attached children have proven to show higher levels of internalising and/or externalising behaviours (O'Connor et al., 2012:265). Child characteristics affect reciprocal interaction with the parent/caregiver in the microsystem (Berk, 2013:27). Research has demonstrated that insecure attachment leads to lowered attention and focus on opportunities for reward for the infant in the environment (Yee & Shiota, 2015:905). Insecure attachment leads to a lower level of orienting response and less of a motivating process to positive environmental stimuli for the infant (Yee & Shiota, 2015:908). Thus, the secure infant is more actively engaged with the environment, whereas the insecure infant is less driven to explore the environment.

Cultural patterns needed to preserve the homeostasis within an environment rely on people having similar values within a society (Garcia Coll & Magnuson, 2000:97). Cultural patterns are significant when analysing a system, explaining why a focus of this study was on an exploration of cultural influences on caregiver-infant behaviours.

According to an ecosystemic perspective, the factors mentioned in the different systemic levels have direct and indirect effects on parenting behaviours. This study focused on these direct and indirect systemic effects on caregivers and infants, and more specifically on the socio-cultural context by which they are affected.

2.4 SUMMARY

This chapter contains an overview of the theory of attachment and the ecological systems theory as the theoretical frameworks for the study. Key concepts underlying the theories were indicated and general explanations of the philosophical underpinnings of the theories were discussed.

The chapter includes a discussion of classic attachment theory and of how the theory has developed to include wider contextual factors that need to be considered in terms of attachment between mother and infant, beyond the classic monolithic mother-infant dyad understanding. Attachment theory highlights that consistent caregiving, together with positive social support from others in the wider environment, leads to the formation of a secure attachment style, which lends itself to ecosystemic theory.

In the third chapter, the researcher focuses on the conceptualisation and formation of attachment in more specific detail. Social and cultural impacts on mother-infant attachment are discussed, in order to provide a rich literature base from which the attachment-based programme and measuring instrument was developed for this study.

CHAPTER 3

CONCEPTUALISATION OF MOTHER-INFANT ATTACHMENT

3.1 INTRODUCTION

In this chapter, mother-infant attachment will be conceptualised by defining attachment and describing key aspects underlying the attachment relationship. A discussion on the development of attachment then follows, providing an overview on prenatal attachment, the stages in the development of attachment in toddlerhood, pre-school and middle childhood, secondary and multiple attachments as well as attachment styles and attachment behaviours. The impact of the socio-economic context and socio-cultural context on attachment is then explored in order to provide a comprehensive and holistic understanding of the fundamental importance of contextual factors in the development of initial attachments. The content of this chapter therefore relates to the first objective for the study namely, to contextualise attachment between mothers and their infant children.

3.2 CONCEPTUALISING ATTACHMENT

The quality of an infant's attachment relationship formed with the mother or primary caregiver have substantial effects on developmental outcomes for the child (Cooper et al., 2009:1). In this section, attachment will be defined, and key aspects of the attachment relationship will be described. It is recognised that attachment might be perceived in diverse ways in different socio-cultural contexts that could affect the application of attachment theories.

3.2.1 The definition of attachment

Attachment refers to the emotional, deep and lasting bond between a primary caregiver, usually the mother, and her infant child, which results in the infant experiencing pleasure and joy when interacting with the caregiver, and comfort in the caregiver's presence in times of stress (Berk, 2013:428; Levy & Orlans, 2014:15; Louw & Louw, 2014:132). In classic attachment theory, attachment is largely defined as a biological, instinctual, innate drive between mother and infant (Vicedo, 2017:1). John Bowlby based his attachment theory on ethological theory, which is underpinned by the belief that a biological, instinctual drive between mother and child exists, and is necessary for the development of secure mother-infant attachment (Vicedo, 2017:2).

The child uses innate signals such as crying, babbling and grasping to attract the mother's attention (Berk, 2013:24). The mother's response will determine the quality of the attachment that is formed, whether *secure* or *insecure*. Attachment theory holds the view that attachment quality is based on proximity to the mother/caregiver and maternal sensitivity to the infant's needs (Funamoto & Rinaldi, 2014:4). Thus, the infant needs to feel certain that her mother is nearby and that she will provide a sense of safety and security

when needed. Furthermore, the infant needs to feel sure that, in threatening situations, she can turn to her mother/caregiver. Once such an attachment has developed, the infant experiences distress when separated from her mother (Robinson, 2007:19).

Attachment theory is based on understanding an infant's initial relationships with her main caregivers, and on how a person's sense of self and inner security is formed throughout the life cycle as a consequence of the quality of this initial relationship (Cooper et al., 2009:1). An empathic and emotionally present caregiver in early childhood leads to the development of a stronger, coherent, contained and more secure infant, that will affect her social attachments to others later in life (Mercer, 2015:382; Sherman, Rice & Jude, 2015:110). In order to be securely attached, the infant should perceive the caregiver as being available if there is a need for protection or comfort, and organise her responses to the caregiver positively in light of her perceptions of the availability of the caregiver (Weinfield et al., 2008:79).

For an infant to be securely attached, the caregiver must be perceived as a reliable, consistent source of care and comfort (Felton & Jowett, 2013:619). Through secure attachment, the infant is encouraged to explore the world and master the environment as she has learned that when experiences are unsettling, she can rely on her caregivers to alleviate her fears (Felton & Jowett, 2013:619; Weinfield et al., 2008:79). Secure attachment also leads to the development of endurance, which results in the capacity for more effective management of stressors and more active engagement in the environment over the lifetime (Dwiwardini, et al., 2014:84).

The opposite would be true for an insecurely attached infant. An insecure infant does not experience caregivers as being available in times of need or distress. Cries for attention may have been met with indifference or with inconsistency, meaning that insecure infants feel anxious about the availability of their caregivers, or angry with them due to their lack of responsiveness (Weinfield et al., 2008:80). Researchers have speculated that the angry reaction is built up so as to punish the caregiver for the lack of responsiveness, with the intention to discourage caregivers from further unresponsiveness (Weinfield et al., 2008:80).

Insecure attachments are not ideal organisations of attachment because they decrease exploration and mastery of the environment, and the development of psychosocial skills (Weinfield et al., 2008:80; Felton & Jowett, 2013:619). However, both secure and insecure attachment are perceived as adaptive efforts to promote proximity to caregivers, which will promote survival beyond infancy (Weinfield et al., 2008:80).

A dysfunctional, broken initial attachment relationship devoid of empathy leads to a diffused, uncontained and insecure sense of self in adulthood and a higher probability of insecure attachments later on in life (Stevens, 2014:123). One can equate the insecure self with the feeling of falling apart when not responded to, to being disconnected from one's

surroundings and not being significant or worthy (Cassiba, Castoro, Costantino, Sette & Ijzendoorn, 2015:55; Huber et al., 2015:558). The insecure self is described as a fragmentation of self and defined as a breakdown of the self into 'pieces', therefore as having less balance and more permeable boundaries (Stevens, 2014:123).

Stern (2002:92) mentions that attunement between mother and infant is important for secure attachment to develop, and describes this as a mutual exchange of stimulating events between mother and infant, where attention is maintained between them for long enough, allowing for a tolerable amount of joy and excitement (Stern, 2002:92). An attuned caregiver has the ability to respond appropriately to the infant's cues to attract the attention of the caregiver (Mingo & Easterbrooks, 2015:471).

Levy and Orlans (2014:121) state that interpersonal neurobiology, a relatively new field in developmental theory, provides insight into the primary role of the infant's attachment in shaping the development of the infant brain. This understanding points to the neurobiological effects of attachment, which explains the importance of the initial connection between mother and infant.

3.2.2 The neurobiology of attachment

Based on research on the structures and functions of the brain, it is widely accepted in the mental health field that experiences in utero and in early postnatal stages, such as attachment, have a significant influence on brain development (Levy & Orlans, 2014:121). Based on this notion, Jennings (2011:28) mentions that an intervention she developed to promote healthy attachment (Neuro-Dramatic-Play), combines a number of approaches to child development, including neuroscience that highlights the complexity of early brain development, the latest understanding of childhood attachment, and the use of play therapy and drama therapy to deal with emotional and behavioural problems in children (Jennings, 2011:28). Jernberg and Booth (2010:4) follow a similar approach in their attachment-based intervention, Theraplay, based on the acknowledgement that "sensitive, responsive caregiving and playful interaction nourish a child's brain, form positive internal representations of self and others, and have a lifelong impact on behaviour and feelings."

Neuroscientists have confirmed that organic structures in an infant's brain are strongly affected by the infant's emotional and social experiences and relationships (Bowlby, 2007:310; Cozolino, 2010:180). It has been found that in infants younger than thirty months, the right hemisphere of the brain develops more rapidly, has more control and governs the development of intuitive and emotional skills that are needed to develop relationships and the ability to be empathically sensitive (Bowlby, 2007:310; Cozolino, 2010:180). These unconscious skills are thus learned by infants by experiencing sensitive and responsive care and attention consistently from the main caregiver (Bowlby, 2007:310). Although the individual is unable to recall these experiences in early life, because they occur in the pre-

verbal phase of brain development, the feelings and expectations formed will have a long-lasting effect on the personality throughout childhood (Bowlby, 2007:310)

Research has found that the brain "remodels" itself from birth to young adulthood and this process is influenced by trauma and negative stress (Goldenring-Fine & Sung, 2014:521). Further research has found that there is a complex interaction between genetic inheritance and environmental experience, mediated by epigenetic processes, which leads to shaping the brain from birth through to adulthood. The epigenetic process is defined as an internal chemical reaction that responds to environmental stimulation such as nutrition, traumatic experiences and toxins, and affects one's genes, where some genes are muted while others are activated (Goldenring-Fine & Sung, 2014:521). The extent to which the epigenetic process influences brain development, however, is still unknown.

The human brain has great plasticity in the early years of life as a result of high production of synapses (Bernier, Beauchamp, Carlson & Lalonde, 2015:1178). A synapse is eliminated when no longer needed in a process called pruning. During this period, an infant's environmental experiences determine which synaptic connections continue and are made stronger by means of more frequent use, and those that are eliminated as a result of lack of activity (Bernier et al., 2015:1178). These processes highlight the effect of environmental input on the development of frontal brain systems, as indicated in Chapter 2. These functions help children to achieve social and academic success because they are able to regulate their thinking and behaviour more successfully (Bernier et al., 2015:1177). In agreement, Levy and Orlans (2014:49) state that sensitive caregiving stimulates the development of the brain stem and limbic system during infancy, therefore, appropriate caregiving during infancy will enhance the emotional, social and intellectual development of the child.

Recently, neuroscientists have discovered that nature and nurture perform similar functions that build the brain and its ability to function effectively (Keller, 2015:178). Nature will determine the potential of the brain, but the quality of nurture is paramount in determining the eventual growth of the brain and its capacities (Goldenring-Fine & Sung, 2014:521). Much of what has been learned about brain development and the effects of nurture has come from research into the effects of deprivation on orphans from Eastern Europe (Jennings, 2011:29). Thus, the understanding is that social networks and neural networks are linked (Cozolinio, 2010: 179-180; Goldenring-Fine & Sung, 2014:521; Schore, 2000:30).

Neuroscientists believe that the brain constructs working models of the self, attachment figures and the environment due to mirror neurons which couple perception and action in the brain together to understand and make meaning of actions of others (Bretherton & Munholland, 2008:109; Lefmann & Combs-Orme, 2013:642). Mirror neurons are "networks in our brains that allow people to feel what others experience as it were happening to them … and are able to share mental processes and emotions" (Levy & Orlans, 2014:83). As a result of newborns being able to imitate mouth opening, lip pursing, finger movements and

some facial expressions, it is postulated that newborns are possibly born with an innate mirror neuron system already in place (Bretherton & Munholland, 2008:109; Lefmann & Combs-Orme, 2013:642). Neuroimaging studies show that the human brain is organically built for interaction between people in order to comprehend other people and to imagine interactions with them through embodied and experiential stimulation of the brain (Bretherton & Munholland, 2008:109; Cozolino, 2010:188-189). Neuroimaging findings provide evidence for the assumption that behaviours support attachment. Studies have demonstrated that this capacity begins early in life (Bretherton & Munholland, 2008:109).

The neurobiology of trauma highlights the role of early attachment experience on the developing brain. Attachment is defined as the connection one has with significant others, whose presence are associated with pleasure and fulfilment, and who provide comfort in times of stress (Minde et al., 2006:546). The role of the mother or caregiver in promoting attachment is illustrated by the concept of the secure base.

3.2.3 The secure base

A secure base is formed when the mother allows the child to explore the world, and supports the child in doing this, but is available when the child needs comfort (Smith et al., 2011:110). The mother is usually considered to be the first attachment figure, who is the person who forms a deep and lasting connection with the child in the first years of life, and who consistently protects and loves the child while providing a sense of security (Levy & Orlans, 2014:15). The child thus feels that she can return to her mother when her levels of stress are increased, and that her mother will welcome her with a warm, open and sensitive response (Sigelman & Rider, 2009:412). The secure base is a term used in ethological studies to describe the conditions provided by a primary caregiver to an infant: the infant is able to explore her environment and become more self-reliant (Aspoas & Amod, 2014:581).

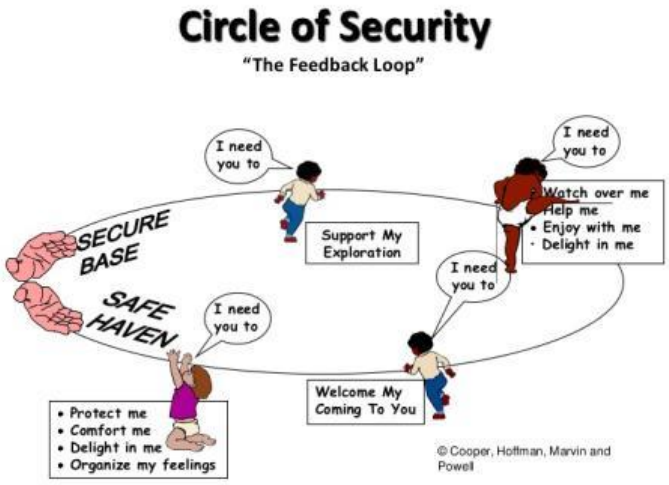

Figure 3.1: Secure base behaviours: (Cooper, Hoffman, Marvin & Powell, 2002:111)

In Figure 3.1 Cooper et al. (2002:111) present the role of the caregiver related to the secure base. The authors indicate how a child ventures out and explores the environment, returning to the warm and welcoming hands of the caregiver when distressed. The caregiver supports exploration but also delights in the child by means of nurturing the child both physically and emotionally, and comforting the child upon her return (Cooper et al., 2002:107). The child thus feels protected and emotionally contained by the caregiver (Cooper et al., 2002:111). The behaviours described below are involved in secure base dynamics.

3.2.4 Proximity seeking and exploration

One of the main tenets of attachment theory is that a new-born will have an innate, biological tendency to seek proximity to her main caregiver (Kennedy, Betts & Underwood, 2014:288; Levy & Orlans, 2014:15; Vicedo, 2017:1). A strong attachment with the main caregiver facilitates exploratory behaviour (Sigelman & Rider, 2009:412). As described by Bowlby (1969), there are a few behavioural systems linked to attachment theory that are associated with proximity seeking and exploration, namely the attachment, the fear, the sociability, and the exploration systems (Kennedy et al., 2014:288). Young children's attachment system is activated by discomfort or fear (Holmes & Slade, 2018:17; Levy & Orlans, 2014:330). As a consequence of the attachment behaviour system and the fear system, an infant will seek closer proximity to her caregiver in order to seek reassurance and security (Kennedy et al., 2014:288). The behaviour systems within the infant will be activated as an immediate reaction to stress or fear. As indicated in Figure 3.1 above, the child returns to the mother or caregiver for protection, comfort and help to regulate her emotions. The mother or caregiver thus serves as a safe haven to which the child can return (Cooper et al., 2002:111). The restored sense of safety deactivates the infant's attachment system, and she can resume her exploratory play (Holmes & Slade, 2018:17).

If a child develops secure attachment to the main caregiver, the exploratory and social systems are enhanced. The exploratory behavioural system leads to behaviours that encourage learning, and the social system to behaviours that enhance sociability (Kennedy et al., 2014:288). An infant will move from seeking proximity and separation protest from the mother to exploring the environment. Therefore, the more secure the infant's attachment, the higher the likelihood that the infant will feel safe to explore her environment (Holmes & Slade, 2018:17). The exploration and sociability aspects of the attachment behaviour system can be linked to the maternal behaviours described by Cooper et al. (2002:107) in Figure 3.1 above. These behavioural aspects are enhanced by mothers or caregivers who actively support the infant by watching over her and helping her to safely explore the environment, but also by a shared enjoyment and delight in the infant's efforts to explore her environment.

Certain caregiver behaviours are related to providing a secure base for the child. These include the emotional availability of the caregiver; sensitivity to the child's feelings and needs; responding appropriately and timely to the child's needs; and a mindset of helpfulness to assist the child to acquire coping skills such as emotional regulation skills (Levy & Orlans, 2014:330).

There should be a healthy balance when separating and reuniting with the mother. Infants show their distress when their mother or caregiver leaves them, thus a description of separation protest follows below.

3.2.5 Separation anxiety

In a functional attachment relationship, the main caregiver is used as a base from which to explore and the infant will present with anxiety with regards to the mother's absence. The separation is postulated as being stressful, and thus there will be separation protest and anxiety. Stern (2002:118) speaks of separation protest occurring at approximately nine months of age. One of the first markers of a 'clear cut' attachment relationship between the mother and infant is separation protest. However, the level of distress differs from infant to infant during the protest and also in terms of the environment, for example a familiar versus an unfamiliar environment (Berk, 2013:429; Louw & Louw, 2014:142; Stern, 2002:118).

Separation protest demonstrates that the infant has formed a specific relationship with the primary caregiver. The infant is beginning to consolidate an internal representation of the mother in order to form a degree of object permanence of the main attachment figure in the mind of the infant (Stern, 2002:118). Reunion is important as an indicator of the kind of attachment formed, for example in how quickly the infant is comforted after a separation, and demonstrating happiness to reunite with the mother (Sigelman & Rider, 2009:412; Stern, 2002:118).

Different styles of insecure attachment show differences in infant reactions in terms of there being protest during separations and reunions or not. Even children with autism show similarities with normally developing children when separating from the main caregiver (Siller, Swanson, Gerber, Hutman & Sigman, 2014:1720). In healthy attachment there is distress or searching for the main caregiver after a separation, and a preference for the main caregiver over a stranger when reuniting (Berk, 2013:429; Siller et al., 2014:1720).

The development of a secure base by means of healthy separations and reunions with the main caregiver leads to a positive inner representation of self or *internal working model* (Berk, 2013:430). In order for the self of the individual to remain whole, sufficient positive self-sustaining self-object experiences (experiences between infant/child and parent) need to have occurred for the individual to feel intact and secure later on in life (Freeman, 2014:545). Attachment theory explains the importance of how sensitive responses need to have taken place between parent, infant and child throughout the child's developmental

stages, in order to build a more secure self, and a secure attachment style with others. The internal working model is a base from which a sense of security or insecurity is developed in the child.

3.3 THE INTERNAL WORKING MODEL

An internal working model is a concept for the schemata formed in the mind of the infant of her relationship with her main figures of attachment, and is reflected from infancy throughout life in her relationships with others (Egeland, 2009:17). The internal working model is defined as the internalisation of people in the mind of an infant and is based on the expectations of the availability of attachment figures and their ability to provide support during difficult times (Berk, 2013:430; Stern, 2002:119). Internal working models are therefore based on mental representations (Delius, Bovenschen & Spangler, 2008:396; Sherman et al., 2015:110). The inner working model then has an influence on the individual's expectations and behaviour in relationships, including the individual's parenting in the next generation (Whipple et al., 2009:219). The foundation of such an inner working model is formed in the early stages of life, from infancy in the first year of life, although there is little research examining the development of internal working models in infancy (Sherman et al., 2015:110).

According to attachment theory, the mechanism that children apply to put caregiving experiences into an attachment pattern is through experienced-based mental representations of their caregivers' predictable behaviour (Sherman et al., 2015:110). As mentioned by Stern (2002:123), early sensory experience is internalised in the mind of the infant, as the infant develops a perception of the stimulus events provided by the caregiver (Jennings, 2011:41,43). These stimulus events are formed by the caregivers' sounds and facial expressions, and the manner in which the caregiver performs such physical expressions greatly contribute to the infant's representation of these expressions (Stern, 2002:123). For instance, the mother might exaggerate her facial expressions and leave a silence between making them, but most importantly the mother should facilitate the infant's ability to recognise these sensory experiences on her face (Stern, 2002:124). The infant therefore slowly forms internal representations of different expressions, vocalisations and movements, which form part of her internal working model (Stern, 2002:125).

Attachment-related expectations are formed early in life. A positive internal working model of self and expectations of significant others as being available and reliable is formed as a result of a secure attachment style, and enables the infant to use this image as a secure base in the caregiver's absence (Berk, 2013:430; Sherman et al., 2015:110). Therefore, an infant with mostly sensitive and responsive caregivers will develop representations, scripts or event schemata of that caregiver as being available when needed and will expect the caregiver to respond appropriately to her signals (Sherman et al., 2015:111; Delius et al., 2008:396).

The internal working model changes with time and is revised and expanded upon by a child as she interacts with her parents and forms close attachments to other adults, siblings and friends over time (Berk, 2013:430). An infant can interpret and re-interpret an experience so that it fits into the existing representation of the present as new experiences occur; bringing about change in a representational model (Sherman et al., 2015:113). Infrequent insensitivity of a parent will not change an infant's representation of the parent as being typically responsive, as long as the parent is mostly sensitive (Sherman et al., 2015:113). Research findings show an increase in mental representations of self and caregiver throughout early childhood, with the most rapid changes between four to five years of age. Children were also found to have more accurate deeper mental representations of their own behaviour at this age (Delius et al., 2008:395). Based on their internal working models, children try to emulate a similar type of attachment relationship from certain caregivers, such as teachers who are sometimes perceived as substitute attachment figures. These significant relationships can serve to reinforce earlier behavioural tendencies. Research has found that securely attached children show better relationships with their teachers than insecurely attached children (O'Connor & Scott, 2007:267).

Many factors affect a child's mental representations of their caregivers, such as caregiver behaviour (sensitivity and responsiveness), infant characteristics (genetics, temperament and sex), and wider contextual factors (culture, socio-economic status), as well as interactions between these factors (Sherman et al., 2015:111). Each unique infant experiences environmental input in different ways, which explains why Bowlby understood internal working models as experience-based phenomena. In South Africa, contextual issues play a significant role in impoverished communities where violence and poverty are rife, along with many social and economic problems (Bain, 2014:593). Thus, an infant's internal mental representations could be affected by such a harsh environmental context.

Infants can have separate mental representations of the same caregiver based on their experiences with that person (Sherman et al., 2015:112). Infants can have separate attachment patterns with two parents, and siblings can have different attachment patterns with the same parent. Concurrently, while an infant forms representations of others, she is forming a mental representation of herself. The understanding is that the caregiver's treatment of an infant affects how the infant comes to view herself (Jennings, 2011:61; Sherman et al., 2015:112). An infant with a sensitive and responsive caregiver, will begin to form a positive representation of self as lovable and worthy of care, of others as reliable, and of the world as a safe place. Inversely an infant with a rejecting caregiver will form a representation of self that is negative and will see the self as not worthy and lovable, of others as unreliable, and of the world as an unsafe place (Sherman et al., 2015:112; Sigelman & Rider, 2009:407-408).

Representations of oneself as a caregiver are thought to begin to develop during adolescence, and also as a consequence of one's childhood attachments (Berk, 2013:436;

Hall et al., 2015:321). These representations of oneself as a caregiver also change and are dynamic during the transition into parenthood, and during pregnancy (Hall et al., 2015:321). A mother's representations therefore change from her own internal representations as a result of her past attachments, to representations of being the caregiver of her own child (Hall et al., 2015:321). It is important to consider how research has validated the importance of past attachments, and how the representations that the mother has formed as a consequence, strongly impact the formation of attachment between mother and infant (Bernier et al., 2015:1852). Normative samples in all types of populations have validated this fact in low socio-economic status populations, adolescent mothers, clinically depressed mothers, as well as Western European, Scandanavian, Asian and Middle Eastern cultures (Bernier et al., 2015:1852). A baby is integrated into the mother's representational system after birth, together with the unique characteristics of the wider context, such as the involvement of the extended family, which is common in collectivist environments in South African communities (Blumberg, 2013:11).

Such maternal representations will differ from one mother to the next, either being balanced and positive whilst valuing the infant's individuality, or unbalanced, disengaged and confused (Hall et al., 2015:321). Research has shown a strong connection between the mother's representation of the infant and the infant's level of attachment security, as the mother's representations affect her interactions with her infant (Hall et al., 2015:321).

Bowlby mentioned two ways in which intergenerational transmission of internal representations may occur, namely through the quality of interaction, and secondly through the open discussion of emotion and relationships (Bretherton & Munholland, 2008:107). Parental miscommunication can lead to disorganised or confused internal working models, whereas parental emotionally open dialogue with the child can lead to revised, more positive internal working models (Berk, 2013:436; Bretherton & Munholland, 2008:107). Behavioural and emotional patterns of interaction are often transmitted from one generation to the next, and are culturally influenced. As an example, some cultures do not believe in much communication and listening to an infant, and not awarding an infant too much status in a community too soon, as is evident in Kenyan and Samoan family relations (Vicedo, 2017:10).

When the child is exposed to multiple caregivers, different kinds of internal working models are believed to develop, namely the hierarchical and integrative models (Howes & Spieker, 2008:321). The hierarchical model is where the child's strongest internal working model (usually with mother) prevails and is most influential (Chetwin, 2010:16; Howes & Spieker, 2008:321). The integrative internal working model is where the child has integrated all the important representations into one independent representation where each working model is independent, regardless of quality or influence on development (Howes & Spieker, 2008:321). An integrative internal working model could therefore apply to most infants

being raised in rural South African communities, where multiple caregivers are involved in raising infants (Bain, 2014:593).

Through research it was discovered that mother and father representations in children are usually concordant and therefore not independent (Howes & Spieker, 2008:321). Usually the mother determines the father-child relationship, leading more toward a hierarchical model of organisation. With regards to comparing representations between children, their secondary caregivers and their mothers, a stronger, more secure relationship was found with the mothers; thereby suggesting the formation of independent working models (Howes & Spieker, 2008:322).

Thus, internal working models of oneself and others in relationships allow individuals in an attachment dyad or in a collectivist child rearing environment to anticipate, interpret and guide their interactions with their significant others (Bretherton & Munholland, 2008:120; Sherman et al., 2015:111). As mentioned above, through the process of development, an infant's internal representations become more complicated and easy to manipulate, allowing both short-term predictions and representations of current, past and future relationships (Bretherton & Munholland, 2008:120; Sherman et al., 2015:111). Normal stabilising processes allow for revisions of working models during childhood or adulthood, depending on how interactions change over time between people, and with the realisation that current models no longer lead to accurate predictions related to current long-term interpersonal relationships (Bretherton & Munholland, 2008:105).

3.4 THE DEVELOPMENT OF ATTACHMENT

In the following section the important stages in the development of attachment, namely the prenatal stage and the sensitive periods as described by ethnologists in the first two years of life, will be discussed.

3.4.1 The stages of development of attachment

Although classic attachment theory indicates the development of attachment during the first two years of life, more recent literature on attachment highlights that attachment in fact starts to develop prenatally.

- **Prenatal attachment**

Attachment commences in the prenatal period as the mother begins to bond with her baby, and is regarded as a unique and special connection that begins to form at this time (Rubertsson, Pallant, Sydsjo, Haines & Hildingsson, 2015:154). The development of this relationship is highly significant in order to adjust to pregnancy, and is formed as a result of communicating with and fantasising about the baby which assists the mother in forming a mental image of the baby (Rubertsson et al., 2015:154). An attachment bond is understood as a relationship that one person has with another. This begins to develop in the prenatal

period as the mother develops a bond with her child (Chetwin, 2010:16). Prenatal attachment is thus important for the postnatal relationship with the child. Levy and Orlans (2014:48) explain that bonding refers to the "biological, genetic, and emotional connection between mother and baby during and at birth" whereas attachment "is learned after birth through interactions between caregivers and child during the first three years."

- **The developmental phases of attachment**

A sensitive period is a specific period of time during infancy where there is a larger likelihood for the infant to develop and where the infant is specifically more responsive to influences within the environment (Minde & Minde, 2006:546). The first few years of an infant's life are considered to be a sensitive period for the development of attachment to a significant person. In this period, the dyadic attunement between mother and infant is necessary for the healthy development of the infant (Schore, 2000:26).

John Bowlby's attachment theory (1969) is based on the premise that the first relationship formed between an infant and main caregiver forms a foundation for development later on in life (Keller, 2015:176). Bowlby is of the opinion that this earliest of relationships adds to the well-being of a person or to later psychopathology in life.

John Bowlby applied ethological theory to the understanding of the human infant-caregiver relationship (Minde et al., 2006:546). The ethological theory of attachment underlies attachment as developing in four phases considered as sensitive periods of development of early attachment (Berk, 2013:429; Delius et al., 2008:396; Keller, 2015:179):

- The pre-attachment phase (birth to six weeks) is the phase where the infant uses innate built-in signals such as grasping, smiling, crying and gazing to keep mother close, and to continue to receive stimulation and comfort. The infant is not yet attached to the mother as she is non-reactive when being left with another adult.

- The attachment-in-the-making phase (six weeks to six to eight months) is where the infant responds with a sense of attachment to the mother or familiar caregiver. The infant is smiling, laughing and babbling more freely with and is also more easily soothed by this caregiver. A sense of trust is developed where there is an expectation that the caregiver will respond when signalled. Even though the infant can now distinguish the mother from others, there is still no protest when separated from her.

- The phase of clear-cut attachment (six to eight months to two years) is when there is a clear attachment bond between the infant and mother, and the infant continually seeks proximity and comfort from the mother. Separation anxiety now becomes evident in the infant's behaviour when the mother leaves. The desire for close proximity to the mother is also displayed, and the mother is now considered to be the main attachment figure.

- ❖ The formation of a reciprocal relationship (eighteen months to two years) develops when there is further cognitive development of the infant and she begins to understand factors that influence the parent's coming and going. As a result, the infant starts negotiations with the mother using requests to alter the goals of the mother rather than just clinging to her. At this age, their cognitive development enables young children to understand parents' explanations of going and coming back.

The concept of genetic transmission of attachment has met with lower levels of validation through research. This supports the importance of the environmental transmission of attachment (Bernier et al., 2015:1853). A caregiver's attachment state of mind must to some degree affect the quality of the attachment relationship between the infant and the caregiver. Both the genetic and environmental transmission of attachment is thus important when considering attachment later in childhood, as is explained in the next section on the ontogeny of attachment.

3.4.2 The ontogeny of attachment in toddlerhood, pre-school and middle childhood years

Attachment occurs in the first few years of life at the same time as bio-behavioural changes occur over the periods of two to three months of age, seven to nine months of age, and eighteen to twenty months of age (Holmes & Slade, 2018:58; Minde & Minde, 2006:546; Zeanah, Berlin, & Boris, 2011:819). One can qualitatively observe new behaviours and abilities during these shifts. It is between these shifts that various attachment behaviours are developed, which are considered attachment benchmarks by clinicians (Zeanah et al., 2011:819). Research studies indicate that environmental conditions have a greater impact on the formation of attachment than physical and neurological child abnormalities (Zeanah et al., 2011:819). Children raised in institutions and those raised with mothers with various types of affective disorders have been found to have greater attachment problems than those who suffer from deafness or conditions such as Down's Syndrome (Zeanah et al., 2011:820).

Firstly, selective attachments must slowly form in the first year of life. Once these are formed, clinicians can start to study the infant's use of the attachment figure as a secure base from which to explore the world (Zeanah et al., 2011:820).

At the age of three years an emergent and goal-corrected partnership begins to develop between the infant and main caregiver **(**Delius et al., 2008:397). During the emergent partnership, proximity is still important, however, the child is able to insert the caregivers' goals into her plan for proximity, and to inhibit her attachment behaviour if needed (Delius et al., 2008:397).

Despite important changes in cognition and language, script-like representations in infants of their interactions with their caregiver have been found to remain consistent from 37 to

54 months of age (Waters, Bosmans, Vandevivere & Dujardin, 2015:1014). A secure base script a child holds is connected to adaptive behaviours in early life (Waters et al., 2015:1021). In the absence of consistent and sensitive care, children eventually develop maladaptive models of social relationships and bring these into the environment. Studies have found that initial attachment security predicts social competence in middle childhood (Waters et al., 2015:1021). A different kind of care and support is required in infancy versus middle childhood; thus, if a child is found to have a secure base script in middle childhood this demonstrates the successful efforts of parents to adapt to the changing needs of their children across time (Waters et al., 2015:1022). Therefore, script-based measures of attachment over time can provide a possible link between initial attachment with caregivers and more functional coping in adulthood.

Goal-corrected partnership involves the older preschooler negotiating within herself with regards to her goals and plans, and entering into goal-corrected negotiations with the caregiver in order to achieve a shared plan for proximity (Delius et al., 2008:397). As development continues, potentially new conscious representations are formed through new experiences and the resulting change of internal working models which have been elaborated on in this chapter. Research has demonstrated that infants and children form generalised event representations based on their first experiences of events that occur in their world (Delius et al., 2008:397). During childhood these representations become elaborate and complex (schema development), and organised according to hierarchy (Delius et al., 2008:397). Language plays an important role in the ontogeny of attachment, leading to more sophisticated mental representations based on the child forming implicit mental representations and explicit narrative representations based on her attachment experiences (Delius et al., 2008:397).

Research has demonstrated that insecure children experience difficulties in adapting to the first few years of schooling and are more likely to develop social problems (Seven, 2010:247). The effectiveness of their school adaptation has been linked with attachment representations in the first few years of life (Seven, 2010:247). It becomes clear that earlier patterns of adaptation are carried forward into the pre-school and school age setting (Seven, 2010:248). Children have been found to display the same behaviours both in pre-school and primary school, with secure children adapting better to schooling than insecure children (Seven, 2010:248). Thus, securely attached infants grow into children who adapt better to their environment and schooling, and they develop pro-social behaviours more rapidly throughout childhood (Seven, 2010:248).

Attachment theory emphasises the predisposition of infants to attach to a significant person; however, the theory also recognises the development of attachment with others (Berk, 2013:437). It is important to have an understanding of primary and secondary attachments when working with attachment in children.

3.4.3 Attachment formation with primary and secondary attachment figures

Primary attachments are those initial attachments formed with people in life with whom a child develops a central lifelong emotional bond (Huber, et al., 2015:558; Sherman et al., 2015:110; Bowlby, 2007:309). Primary attachments are the attachment to the main attachment figures (mother, father and/or legal guardian) who are the main caregivers in the infant's life, and have the most regular, consistent contact with the infant (Chetwin, 2010:17; Mahler et al., 2000:52; Sherman et al., 2015:110). Although the primary attachment figure is often the birth mother, there are many cases where a father, adoptive mother, nanny or grandparent raises the child, and the child develops a primary attachment with them rather than with the birth mother (Bowlby, 2007:309; Chetwin, 2010:17). Therefore, although infants are predisposed to attachment with a single, significant person, they also form attachments with other familiar people (Berk, 2013:437)

A secondary attachment is defined as another attachment in the child's social environment with a special person who is not the immediate caregiver, but who is close enough to affect the infant directly, and with whom the child has developed a close secondary attachment (Bowlby, 2007:309). Strong, consistent secondary attachment figures have proven to be a buffer from breaks in attachment (Keller, 2015:183). Research has shown that an infant who has the protection of one other consistent, available attachment figure is likely to experience a lower degree of deterioration when exposed to stressful life experiences later in life. Secondary attachment figures can be fathers living in a separate home, grandparents and other relatives, adoptive and foster parents and child care providers (Howes & Spieker, 2008:318). Even in families where the infant is raised in the same household by both biological mother and father, the infant will develop two sets of relationships interdependently and the infant's attachment security with the two parents will differ. When caregiving activities are shared, there is far less of a difference between child-mother and child-father attachments (Howes & Spieker, 2008:318).

Because the roles of men and women in family life have changed over time, networks of attachments are thought to play a more prominent role. In modern-day times, both parents often work, leaving children to be cared for by more than one adult, whereas children in adoptive and foster care go through multiple attachment relationships both simultaneously and sequentially (Howes & Spieker, 2008:317-318). Infants will come across different attachment figures at different points of their development (Howes & Spieker, 2008:318). As the infant grows, professional non-parental caregivers can take on the role of a substitute attachment figure across different contexts offering different levels of sensitivity and social stimuli, which assist children in balancing and regulating their emotions (O'Connor et al., 2012:592; Pallini & Laghi, 2012:161). In order for such a caregiver to be considered a substitute attachment figure, the child needs to show signs of attachment toward the caregiver, and the caregiver needs to demonstrate sensitive attachment behaviours towards the child (Pallini & Laghi, 2012:161). Professional caregivers are also

considered attachment figures when they provide physical and emotional care, if their presence in the child's life is consistent and if they have developed an emotional bond with the child (O'Connor et al., 2012:592). Children often perceive consistent caregivers as a secure base in child care environments and when experiencing trauma and anxiety (Pallini & Laghi, 2012:161).

Adequate caregiving from secondary attachment figures can therefore play a significant role leading to an infant developing a more secure base or a 'second skin' in the absence of a parent, and filling the gap by means of functional attachments to others (Keller, 2015:182). Research studies on the grandparents of the infants of adolescent mothers showed that when grandparents are present and involved in the infant's life, the infant displays higher levels of secure attachment (Howes & Spieker, 2008:319). In South Africa, many infants and children being raised in impoverished settlements are raised by numerous caregivers in the extended family setup. In such circumstances, secondary attachments are formed very early in life and play a significant role in the development of the infant (Blumberg, 2013:46, 48).

Research has found that when adoption occurred after six months of age, infants experience difficulty in forming positive, trusting, secure relationships with the adoptive parents (Howes & Spieker, 2008:320). More recent studies, however, suggest that if adopted in the first year, normal child-mother attachment formation occurs with the adoptive parent (Howes & Spieker, 2008:320). It has also been found that children removed from high-risk environments formed secure primary relationships with their caregivers within two months of being placed in high quality shelter care (Howes & Spieker, 2008:320).

In the United Kingdom, there are a number of organisations which apply caregiving models that foster affective, sensitive and long-lasting secondary attachments. These are known as the Soho Model and the Richmond Model (Bowlby, 2007:317). The Soho Model is a charity organisation working with seven to eight self-employed carers at a time, under the supervision of a co-ordinator from a family centre, where each child carer is paid directly by the parents and expected to form a loving, sensitive and long-term connection with the child involved (Bowlby, 2007:317). Each carer works with three children, of whom only one is under eighteen months of age. The Richmond Model is also a charity model that trains and supports child-minders with the use of co-ordinators and outreach workers who visit the child minders in the homes in which they work. The childminders are put in touch with networks that provide support to reduce isolation and stress, and monitor child-childminder attachments (Bowlby, 2007:317).

Secondary attachment figures are relevant to this study, as often in the South African context and cultures, infants are cared for by grandmothers while their daughters are either at work or at school (Blumberg, 2013:8). In many cases, where grandmothers are not available, caregivers are selected to take care of the infant from either the mother's or father's side of the family by the parents, grandparents and extended family (Blumberg, 2013:9; Keller, 2015:183). Secondary attachment figures in the infant's immediate

environment are important in terms of substitute attachments during trauma and family breakdown where main attachment figures are not as emotionally and/or physically available, such as during a divorce or separation. In such cases, the presence of secondary attachment figures leads to an improved adjustment to a new life-style, normalising the absence of a parent, building resilience and inner security, and increasing the likelihood of trusting others when forming new attachments later in life (Blumberg, 2013:3). The close link between primary and secondary attachments emphasises the importance of consistent, nurturing secondary caregivers for the infant.

Children learn to attach themselves to secondary figures based on their initial attachments to the main attachment figures (Ainsworth, 1969:13). Ainsworth states that there is a link between the absence of people and coping with hunger, cold, pain and other drives. When there is the physical experience of another individual there is an associated reinforcing reduction in these drives as the infant draws herself to the nearness of the mother and to other adults (Ainsworth, 1969:13). Consistent physical proximity between both the mother, secondary attachment figures and the infant has thus been found to be important in securing a secure base of self in the infant (Blumberg, 2013:4).

Primary and secondary attachments need to be consistently stable and accessible to the infant in order to foster the development of a secure base and secure attachment style. The different attachment styles will be discussed in the next section.

3.5 ATTACHMENT STYLES

Attachment is defined as the intimate bonds that individuals form with others over time (Ringer, Buchanan, Olesek & Lysaker, 2014:210). These bonds have been found to develop early in life with the main attachment figures and serve as a base for what the individual expects in interpersonal relationships across her life (Ringer et al., 2014:210).

Two main types of attachment styles are identified: secure and insecure attachment (Ringer et al., 2014:210). Insecure attachment is further differentiated into avoidant, ambivalent and disorganised attachment (Bosmans, Van de Walle, Goossens & Ceulemans, 2014:496; Mercer, 2015:384; Ringer et al., 2014:210). The types of attachment were initially categorised by Mary Ainsworth and her colleagues with the use of the standardised Strange Situation Procedure (Berk, 2013:430; Keller, 2015:177).

Mary Ainsworth specialised in longitudinal studies centred on attachment and focused on separations and reunions between infant and mother, according to which she formulated the concepts of secure and insecure attachment (Berk, 2013: 431; Jennings, 2011:49; Main et al., 2005:246). Ainsworth conducted her study in both Ugandan and American infant-mother pairs (Jennings, 2011:49; Main et al., 2005:245) in which attachment was analysed behaviourally with children from the ages of six to 18 years. A follow-up interview was then conducted at a later stage, examining attachments throughout the life of each former

infant. It was found in the American participants that individual differences were strongly related to early attachment quality with the mother (Main et al., 2005:245). Importantly, a high correlation was found between the security of attachment in the infant and that of the 18/19-year-old in relation to their initial attachments in both the Ugandan and American infant-mother pairs (Main et al., 2005:245).

The findings of the study show substantial evidence for the importance of early positive or negative attachment leading to secure or insecure attachment styles and personality development. Secure attachment, as verified through the study, at six years of age, corresponded to a secure, independent person at 19 years of age (Main et al., 2005:245). Through all the analyses that were done in this research study, none of the 26 participants who were insecurely attached in infancy earned the status of being in the secure attachment category at age 19 as adolescents, regardless of their life experiences (Main et al., 2005:246). Initial attachment of the individual with her primary caregiver in her earlier life therefore has a significant effect on the sense of security, resilience to life events, and attachments to others throughout life (Berk, 2013:432).

A more elaborate explanation of each attachment style is provided in the following section. The first three attachment styles namely secure and insecure-avoidant and insecure resistant classifications were identified by Ainsworth, and the fourth insecure disorganised classification was introduced by Mary Main, an American psychologist, in 1943 (Sigelman & Rider, 2009:432).

3.5.1 Secure attachment

Secure attachment develops when there is a good balance of sensitivity and responsiveness when the caregiver responds to the needs of the infant (Jennings, 2011:121; Mahler et al., 2000:40). The caregiver characteristically should be consistently sensitive and responsive, allowing the infant to feel safe in the idea that she can return to her caregiver at anytime (Mckenna, 2009:8; Robinson, 2007:22-23). The infant is mostly calm and unthreatened by the presence of a stranger when there is a secure attachment style.

Emotional object constancy leading to secure attachment is defined as the internalisation of a constant, predictable inner image of the main attachment figure (Berk, 2013:430). If the main attachment figure provides the infant with a sense of consistency, security and comfort (object constancy), the infant-child slowly starts to develop a positive internal working model of security and trust in the responsiveness of the main caregiver (Robinson, 2007:23). Thus, the infant will move on to exploring her environment confidently and develop an internalised positive image of the self and others (Berk, 2013:430). The effect on the internal working model is thus positive with a secure attachment style.

With regards to future functioning in terms of behaviours and relationships, there is evidence showing that attachment security leads to greater inner resilience and thus a

greater ability to overcome adversity (Dwiwardini et al., 2014:84). Inner resilience is important when developing virtues, and stems from a positive general outlook and a more secure base (Dwiwardini et al., 2014:84). A secure attachment style leads to a secure base of self within the infant and to positive mental, social and physical development throughout life (Dwiwardini et al., 2014:84; Sigelman & Rider, 2009:432).

Various links have been found in research between initial sensitive parenting, secure attachment and various individual characteristics. Securely attached individuals, from homes where parenting was mostly sensitive, explore their environments more readily, take more risks and benefit more from new experiences (Dwiwardini et al., 2014:84; Robinson, 2007:23; Sigelman & Rider,2009:412). Securely attached individuals therefore face possible stressors more effectively, as there is always a sense of inner security as a result of the sensitive parenting, leading to a base to which they can retreat (Dwiwardini, et al., 2014:84). A secure attachment style lends itself to lower levels of attachment avoidance and anxiety, which has been found to lead to stronger relational virtues of understanding and forgiveness (Dwiwardini et al., 2014:84). These are virtues that are considered to strengthen relationships and are thus called “relational”. It can thus be concluded that there are widespread positive effects of sensitive parenting on the personality of the infant and on the infant’s later development.

Research has discovered that infants who are left in the care of alternate caregivers for longer than 20 hours a week in the first year of life tend to have higher rates of insecure attachment, whereas those infants who are in exclusive, consistent, sensitive maternal care in the first year of life, have been found to have higher rates of attachment security (Howes & Spieker, 2008:323). Extensive time in day-care in the first year of life is a risk factor for developing insecure attachment between the infant and mother (Howes & Spieker, 2008:323). Other studies have found that as long as an infant experiences warm, receptive and routined care from someone other than her mother, not much of a difference in the security of attachment is evident (Sigelman & Rider, 2009:417). These studies indicated that the quality of day care in terms of sensitive caregiving and cognitive and language stimulation proved to be important.

3.5.2. Avoidant attachment

Avoidant attachment occurs when the main attachment figure is characteristically non-reactive to the needs of the infant and shows very little interest in the infant. As a result, the infant forms a negative internal working model (Mahler et al., 2000:110). The child becomes insecure and deactivates emotions, leading to repression or disassociation from emotion, while seeking attention which is accepted indiscriminately (Stevens, 2014:124). A fear of abandonment develops and may continue into adulthood. The child learns to cope by disassociating from the feelings of abandonment (Mckenna, 2009:11). These infants minimise their emotional expression, inhibit their emotional communication, and rely less on the attachment figure to assist in containing their emotions (Holmes & Slade, 2018:16;

Martins et al., 2012:581). For the insecure-avoidant infant, representations have been formed of her attachment behaviours being rejected and therefore the infant learns to minimise her attachment needs with those caregivers to avoid rejection (Sherman et al., 2015:112).

With regards to the effect of an avoidant attachment style later on in life, a link has been found between avoidant attachment style and paranoia, as well as with delusional ideation (Ringer et al., 2014:211). An Avoidant attachment style has been found to correlate with higher levels of depression in adulthood and is related to lower self-esteem and lower levels of hope, as well as a negative self-image later in life (Ringer et al., 2014:211, 216). Individuals with an avoidant attachment style have a lower expectation of receiving support and show behaviour that indicates no desire for intimacy and support (Felton & Jowett, 2013:625). Avoidant attachment has also been found to lead to a level of discomfort with and less of an inclination to engage in intimacy with partners (Barry & Lawrence, 2013:485). Other research has linked attachment avoidance to narcissistic behaviour and lower levels of humility and with a lower level of dispositional gratitude (Dwiwardini et al., 2014:84).

Exposing these individuals to a consistent conscious, warm and supportive inter-personal environment, can be positive and healing. This kind of environment would help an individual struggling with an avoidant attachment style to become less avoidant over time (Felton & Jowett, 2013:626).

3.5.3 Resistant (ambivalent) attachment

Resistant (ambivalent) attachment is displayed when the infant experiences the parent as characteristically inconsistent in responding to her emotional and physical needs (Sigelman & Rider, 2009:412). The infant therefore feels ambivalent towards the parent; displaying clingy as well as angry feelings when the parent returns after a separation, and struggling with the parent when being held and even hitting and pushing the parent away (Cooper et al., 2009:2). Resistant attachment occurs when an infant seeks closeness to the attachment figure, however, resists her once she is present (Mckenna, 2009:11). These infants cannot be easily comforted and may continue to hold onto the parent, while crying and clinging even after being held. With such an attachment style, the infant fails to explore the environment (Mckenna, 2009:11).

The resistant (ambivalent) attachment style leads to a negative internal working model, as the infant is confused due to the main caregiver's inconsistency. These infants are never sure whether they will receive the comfort and affection that they are seeking from the caregiver (Sigelman & Rider, 2009:413). This confusion leads to an inner representation of self which is unclear and not entirely a positive one. In insecure-resistant contexts, the infant will thus form a mental representation that her caregiver responds inconsistently. The infant then maximises her attachment needs in order to receive maximum attachment with the caregiver (Sherman et al., 2015:112).

In terms of the effect on future functioning, the ambivalent attachment style leads to lower self-esteem levels with less satisfaction of basic needs and lower perceptions of social support (Felton & Jowett, 2013:620).

3.5.4 Disorganised attachment

Disorganised attachment occurs when the main attachment figure characteristically focuses more on her own needs, not being as responsive to the infant's needs (Louw & Louw, 2007:130). The classification of disorganised attachment remains vague (Duschinsky, 2015:32). Disorganised attachment, however, refers to the attachment figure displaying a frightening character and behaviours in their daily interactions with their child, eliciting a fearful reaction from the infant (Chetwin, 2010:25; Paetzold, Rholes & Kohn, 2015:147). Characteristically, the frightening behaviours of the attachment figure are described as threatening gestures, dissociative behaviours, submissive behaviour towards the infant and sexualised or romantic behaviours directed towards the infant (Paetzold et al., 2015:147). Disorganised attachment is therefore associated with extremely negative caregiving characterised by insensitive or abusive care, maternal depression and the absence of love and affection (Berk, 2013:432; Levy & Orlans, 2014:99).

When distressed, the infant's reaction is thus one of moving away from the attachment figure, which is the opposite response to the biological need to attach and seek proximity to one's main attachment figure when afraid (Paetzold et al., 2015:146). When attached in a disorganised style, the infant displays certain behaviours such as sudden, jerky movements, freezing and disassociation (Delius et al., 2008; Levy & Orlans, 2014:98). The infant has not developed a consistent way of coping with her need to be close to the caregiver when stress and confusion are experienced (Keller, 2015:177). The basis of disorganised attachment is a fear or fright response without solution. When reuniting with her attachment figure, the infant displays disorientated, conflicted or confused behaviours (Levy & Orlans, 2014:98; Paetzold et al., 2015:146). An example would be the infant screaming for the mother but then moving away with anxiety when she returns. Disorganised behaviour is only noted for a short period, and usually the infant would be placed under another style of attachment (Paetzold et al., 2015:146).

There is often a conflict within the infant to either approach or to move away from the caregiver leading to a confused internal working model, and a great deal of insecurity (Cooper et al., 2009:2; Duschinsky, 2015:35).

In terms of the effect on future functioning, disorganised attachment in infancy has been found to lead to predictive behaviours in childhood, adolescence and early adulthood, and is regarded as the most negative form of attachment with the highest risk factor for psychopathology, and the worst socio-emotional outcomes (Hall et al., 2015:323; Paetzold et al., 2015:147). Studies have demonstrated that disorganised attachment is associated with lower inhibition capacity at age five and general executive inabilities at the age of eight

(Bernier et al., 2015:1178). Therefore, children who are more securely attached score higher in their general executive functioning in their school years (Bernier et al., 2015:1184).

The style of attachment an individual forms in early life has been proven to stay fairly stable over time (Main et al., 2005:245). This aspect will be discussed in the following section.

3.6 THE STABILITY OF ATTACHMENT

One of the most important questions in attachment theory is the stability of attachment across the lifespan. Currently, most attachment research across time involves focusing on the link between infant-child behavioural observation and how this overlaps with prospective autobiographical interviews in adolescence and adulthood (Waters et al., 2015:1021). Research has confirmed that secure/insecure attachment in infancy leads to a higher predictability of a similar attachment style (behavioural, representational and linguistic processes) into adolescence and early adulthood (Main et al., 2005:245). Research has shown that securely attached infants grow to believe in themselves over a consistently longer period of time, predicting stable psychological health and confidence throughout life (Dwiwardini et al., 2014:84).

Other studies have found the stability of attachment style to be affected by life experiences such as maternal depression, family functioning and child maltreatment (Berk, 2013:432; Weinfield et al., 2008:695). Changes in attachment security are related to changes in the family environment having an impact on the stability of attachment. Infants experiencing positive life conditions and coming from middle class homes, have been found to have a more secure and stable quality of attachment (Berk, 2013:432). However, infants living in less favourable environments with lower socio-economic conditions have been found to have a more insecure attachment quality and exhibit changes from one insecure pattern to another (Berk, 2013:432). Secure infants have been found to maintain their attachment status more than insecure infants (Berk, 2013:432).

Studies indicate that individuals can alter their insecure attachment style if they encounter an attachment figure who is characteristically supportive, sensitive and responsive on a consistent basis (Felton & Jowett, 2013:619). These authors explain that individual attachment styles are underlined by their internal working model. If an individual is exposed to consistent behaviours that contradict the internal working model over time, the internal working model perceptions can be altered. However, disorganised attachment seems to be the exception in that this attachment pattern seems to remain as stable as secure attachment (Berk, 2013:432). Levy and Orlans (2014:99) state that disorganised attachment is associated with the long-term effects of unresolved loss, fear and trauma of growing up in abusive and neglectful caregiving environments. These authors explain that, as the mothers of disorganised infants often have a history of abuse and family violence, disorganised infant attachment is likely to be transmitted from one generation to the next.

When analysing attachment, many researchers focus on the patterns of attachment behaviour based on the timing and effectiveness of the mother's reactions to the infant's cues (Weinfield et al., 2008:79). The focus is on how attachment behaviours are organised to support the quality of the attachment relationship and lead to the stability of attachment.

3.7 ATTACHMENT BEHAVIOURS

The measurement of attachment is based on attachment behaviours, which include attachment behaviour by the infant and responses by the caregiver. These measures are applied in tests such as the Strange Situation Procedure (SSP), Attachment Q-Sort and the Infant CARE-Index (Farnfield, Hautamaki, Norbech & Sahhar, 2010:319). The repertoire of infant attachment behaviours will be discussed in the next section.

3.7.1 Infant attachment behaviours

Infant attachment behaviours are defined as behaviours that are intended to seek comfort or reassurance or try to obtain attention from the main caregiver by means of approaching, crying, seeking contact and attempting to maintain that contact (Weinfield et al., 2008:79). Bowlby stated that the attachment behaviours of babies such as babbling, grasping and crying are built-in signals that encourage the parent to be close to, love and look after their baby (Bick & Dozier, 2013:95; Keller, 2015:179). The intention behind keeping the mother near is to ensure survival by reaching optimal growth through feeding, protection, affection and stimulation (Minde et al., 2006:546; Sigelman & Rider, 2009:407). The repertoire of attachment behaviours includes sucking, clinging, smiling and vocalising (cooing and babbling), and expressions of negative emotions such as moaning and crying (Sigelman & Rider, 2009:407).

All infants show various attachment behaviours in varying quantities based on how much threat they perceive in their environment. It is regarded as abnormal behaviour for an infant not to express attachment behaviours to the main caregiver in a threatening or dangerous environment (Weinfield et al., 2008:79).

Infant attachment behaviours such as attention to and exploration of the environment are important behaviours to observe (Mckenna, 2009:13). Research has found a strong connection between social attention, co-ordination and attachment in mother-child interactions (Jennings, 2011:195-196; Pallini & Laghi, 2012:159; Stern, 2002:4). Attachment behaviours have been measured based on the infant's co-ordinated attention to the caregiver and to joint attention to objects as well as face-to-face attention (Pallini & Laghi, 2012:159). Further research has found that toddlers attached with a disorganised style engaged in less joint attention with the caregiver than those who had a secure attachment style, and that children with attachment disorders have difficulty controlling their attention (Pallini & Laghi, 2012:159). The Strange Situation Procedure that was developed by

Ainsworth and her colleagues for measuring attachment, characterises patterns of attachment by scrutinising a number of variations in attention flexibility (Pallini & Laghi, 2012:159).

There is a connection between attachment and exploration (Mckenna, 2009:13). The securely attached infant/child is able to focus on the main caregiver in times of stress and fluctuates attention between the main caregiver as the secure base and the environment, and is able to show the main caregiver the results of her environmental exploration (Pallini & Laghi, 2012:159). This is often evident in practice by means of play and handing toys to and from each other (Jennings, 2011:196). In most cases, the attention of children with avoidant attachment is focused more on the environment and play, regardless of how the mother tries to obtain her child's attention or whether she is present or not (Pallini & Laghi, 2012:160). A child with resistant-ambivalent attachment has been found to specifically focus on the caregiver, ignoring the environment, whilst children with disorganised attachment styles show no caution and no structure as to whom or to what they give their attention. There is thus a breakdown of any specific behavioural strategy (Pallini & Laghi, 2012:160).

Effective forms of attachment behaviour control children's emotional balance, however, it is difficult for caregivers of insecure children to facilitate emotional regulation (Pallini & Laghi, 2012:160). With regards to disorganised attachment, the parent's inability to protect the child in times of need can lead to a child continually being in a state of fear coupled with an inability to self-regulate her emotions (Madigan, Atkinson, Laurin & Benoit, 2013:673). The child thus develops less appropriate attentional and behavioural strategies to cope with stress, leading to heightened vulnerability to internalising psychopathology at a later stage (Madigan et al., 2013:673). Disorganised attachment has been found to have similar features to disassociation, leading to a possible route to disassociative disorders (Madigan et al., 2013:674; Sigelman & Rider, 2009:415).

Children in avoidant attachment relationships with their caregivers externalise their problems through aggression and hostility, reacting to others with an antagonistic attitude (Jennings, 2011:152-153; Madigan et al., 2013:672; Sigelman & Rider, 2009:411). Children in resistant relationships with their caregivers develop extreme anxiety and an over-attachment or dependence on their caregivers, as they are pre-occupied with maintaining their caregiver's attention, and therefore explore the world less (Madigan et al., 2013:673). Such children could eventually become more withdrawn from society and show regressed behaviour as a result of anxiety in terms of coping with the outside world (Madigan et al., 2013:673).

Infant attachment behaviours can only be understood by reflecting on caregiver behaviours, and by referring to the reciprocity of affect attunement and emotional availability between the infant and caregiver.

3.7.2 Caregiver attachment behaviours

Maternal sensitivity leads to positive attachment behaviours related to infant attachment security (Mckenna, 2009:16). Sensitive caregiver behaviours can be described as the awareness the caregiver has of the infant and of the infant's actions and vocalisations, by means of following the infant's communicative signals to indicate her needs and wants (Chetwin, 2010:18; Mingo & Easterbrooks, 2015:471). Studies have demonstrated that the quality of continuous maternally sensitive behaviour beyond the early stages of infancy plays a significant role in heightening attachment security (Chetwin, 2010:18; Hall et al., 2015:321). Responsive caregiver behaviours entail the ability to respond appropriately and accurately to the infant's signals (Mingo & Easterbrooks, 2015:471). Examples of specific maternal behavioural indicators that have been used in ascertaining attachment security are sensitivity and body language (Hall et al., 2015:321). As mentioned by Stern (2002:93), a caregiver who actively plays with her baby and enjoys it, provides her baby with important stimulation leading to a synchronised dance of mutual expressions between the mother and baby.

A range of negative parenting behaviours all linked to lower infant attachment security have been researched, namely hostility, coercion and maternal detachment (Hall et al., 2015:321). Research has confirmed that the avoidance of eye contact and the disconnected face-to-face position and negative expression by the mother, is the most consistent and persistent feature of childhood autism (Stern, 2002:128). Further research has demonstrated that in cases of autism and childhood schizophrenia, this type of visual disconnection from the human environment can be linked back to the first half year of life (Stern, 2002:138). Face-to-face gazing is often perceived as an attachment behaviour that elicits attunement (Whitcomb, 2012:276).

Reciprocity involves interactions between the caregiver and child that complement and extend the child's ability to identify and engage with external objects in the world, essential for the child's psychosocial development (Mingo & Easterbrooks, 2015:471). Gentle and loving sensitive care provides the child with a mirror showing the child that she is loved and worthy, therefore creating a positive internal representation of herself and future events and encounters with people (Sigelman & Rider, 2009:195-196). As mentioned by Stern (2002:139), emotional co-regulation between the infant and caregiver is essential for secure attachment, where there is a mutual regulation of emotion and correcting or not correcting the incremental course of their interactions in order to maintain an optimal emotional range (Booth & Lindaman, 2010:62; Sigelman & Rider, 2009:410-411; Horenczyk, Schiff & Brom, 2015:339). Emotional co-regulation is thus an important caregiver function.

A mysregulation between the mother-infant dyad leads to insecure attachment. Mysregulation is defined as a failure to goal correct the levels of attention, excitement and emotion where the optimal range is seldom maintained, leading to regulatory failures and over or understimulation (Leerkes et al., 2015:94; Stern, 2002:139). Controlling and intrusive

behaviours by the caregiver have been found to be one of the most common causes of over-stimulation, interfearing with the infant's self-regulatory behaviours (Stern, 2002:139). Understimulation can also lead to regulatory failures and insecure attachment, and occurs when the caregiver is unable to capture and hold the attention of the infant, allowing the level of emotion or excitement to fall below the level of an optimal range (Stern, 2002:145). A depressed mother might be able to go through the normal practical processes of caregiving, but will not be able to light up her face, voice or movements to show expression and connect with her baby (Stern, 2002:146). Such a mother will therefore be unable to enjoy her own behaviour in order to enjoy time with her infant. With such blunted affect as a consequence of her character or neurosis, this mother is unable to moderate the richness of the social stimuli she provides to the infant (Stern, 2002:146).

With regards to infant attachment behaviours, the phases of the individuation-separation process sheds light on how an infant moves from a non-aroused new-born state mostly functioning purely on a physiological level to developing a sense of identity (Mahler et al., 2000:52). This process will determine the attachment behaviours of the infant as she develops as well as appropriate responses from the caregiver in the different phases in the process. Margaret Mahler's study is particularly salient in this regard and shall be elaborated on in the following section.

3.7.3 The development of early attachment behaviours: the work of Margaret Mahler

For the purposes of this study, the researcher considers it relevant to explain the concepts that describe the initial attachment to significant others early in life, and their impact on the formation of self and on various attachment styles. A securely attached person feels safe as a consequence of having received a fair balance of empathy and nurturance from primary caregivers early on in life (Cassiba et al., 2015:55; Whipple et al., 2009:219). An insecurely attached individual, on the other hand, experiences intensity of emotion, dependency, possible agitation and fears of being rejected with regards to attachments to others (Cassiba et al., 2015:55; Huber et al., 2015:558). These extreme emotions are the result of a less balanced level of empathy and nurturance received earlier on in life from primary caregivers.

The importance of initial attachment and its relevance for understanding later attachment will be described with reference to Margaret Mahler's work (Mahler et al., 2000). Margaret Mahler and her colleagues conducted research at the New York Institute which focuses on the psychological process of separation from the mother (main attachment figure) from the age of four months into toddlerhood (Mahler et al., 2000:3). Her work analyses and studies the psychological birth of the infant and the various impacts on identity formation as a result of the first attachments to and separations from the mother. Mahler demonstrates how these attachments have a strong impact on anxiety and identity formation, leading to either healthy individuation or psychosis, autism, fragmentation and splitting of the self. Mahler's research was conducted over five years following careful observations of mothers

and their infants in a specially designed research setting consisting of infant and toddler rooms and one-way mirrors designed to observe mother-child bonds.

The process of differentiation involves how an infant transforms psychologically from feeling like one unit with her mother, to differentiating and becoming an individual both physically and psychologically (Mahler et al., 2000:289). The process includes four phases, i.e. hatching, practicing, rapprochement, and consolidation of individuality.

- **Phase one: Hatching**

The term '*hatching'* (Mahler et al., 2000:53) covers the process of differentiation from the main attachment figure and the formation of a body image, and describes how the infant in her wakeful hours begins to perceive external stimuli as being outside of herself. A memory bank slowly begins to develop where the infant stores memories that are seen as good and bad in relation to the mother and her relieving of physiological and emotional experiences such as hunger, and the need for holding, attention and love. It is evident that balanced attachment to the mother figure at this stage is very important. Over time, the infant becomes more alert and aware of her environment and perceptions as she differentiates from the mother and "hatches".

Separation/individuation from the mother slowly commences at around six months of age, when the infant begins to separate her body from her mother's (Mahler et al., 2000:54). When the mother is unavailable, transitional objects come to substitute the feelings of love and warmth the mother gives, which explains why a teddy bear, for instance, would be pressed so close to the face, replacing the mother's breast or skin. This stage occurs at the same time as the beginning of clear-cut attachment indicated by Bowlby, which is the period in which babies begin to display separation anxiety (Berk, 2013:429). Late hatching occurs when mothers are emotionally depressed and/or physiologically unavailable for their infants, which leads to infants having delayed reactions towards their mothers as attachment figures. Early hatching can arise when mothers are anxious or uncertain, leading to earlier adjustment on the part of the infant in order to make adaptation more comfortable (Mahler et al., 2000:58). Early hatching can lead to ego development being rather vulnerable as a result of premature differentiation, and therefore leaving the person easily overwhelmed with anxiety and distress. Mothers who experienced the symbiotic phase positively, and avoid giving too little or too much, have infants who differentiate themselves quite actively by showing some distance from the mother's body. Emotional self-regulation by the mother and co-regulation with the baby are necessary for this process (Sigelman & Rider, 2009:410).

- **Phase two: Practicing**

The second phase, known as '*practicing'*, can be broken down into the early practicing phase and the actual practicing phase (Mahler et al., 2000:65). In the early phase, the infant

differentiates by physically moving away from the mother, while still holding on to her to some degree. The full practicing phase is when the infant is able to walk freely away from the mother. Inanimate objects, such as blankets and toys, are at this stage somehow associated with the mother, and one of these objects may be chosen as a transitional object (Klein, 1987:249-250). The mother is, however, still most interesting and integral to the infant. The infant sees and experiences more of the world as her locomotor abilities develop.

Infants who experience the best contact with their mothers from a distance are those most able to detach and move further away from her (Mahler et al., 2000:66). Where closeness is not easily given up by the mother, or there is uncertainty about separating, less pleasure is experienced by the infant in this phase. Therefore, the most successful development occurs when mothers provide for the needs of the infant but concurrently allow for and support the development of the infant's ego (individual identity) to develop, by providing both the maternal nurturance and distance needed. However, through this entire phase, the mother is still needed to fulfil the needs of the infant through physical contact.

The full practicing phase is characterised by the toddler being mobile, and discovering the outer world, from about 12 to 16 months. This period ties in with Bowlby's fourth phase of attachment, i.e. that of forming a reciprocal relationship (Berk, 2013:429). The toddler now moves to a narcissistic focus on herself, her body, and her growing reality. At this stage, the toddler accepts substitute adults as mother figures, and does not react too strongly to toys being taken away from her. The toddler is found to be very happy with her newly developing abilities, and with some breakaway from the fusion with the mother (Sigelman & Rider, 2009:412).

- **Phase three: Rapprochement**

From about the age of 18 months, the toddler becomes more conscious of her separateness from the mother. With her increased physical and mental ability, the toddler now has a desperate need to share all newfound and cultivated skills with the mother, and to experience love from her (Berk, 2013:429). As a contrast to the more distant need for closeness in the practicing period, the opposite is needed in this phase. It is therefore known as '*rapprochement*' (Mahler et al., 2000:76), which refers to an iterative moving away and then returning to the mother for reassurance. This type of behaviour is similar to the secure base behaviour described earlier in terms of the child feeling free to explore the environment and return back to the safety of her mother (Mckenna, 2009:22, 43; Smith et al., 2011:110). It is crucial for the mother to be emotionally available during this stage, however, the father's availability is also important (Smith et al., 2011:134). In this way, already at a young age, the emotional and physical presence of both parents is needed to provide a secure base and a sense of confidence.

During this phase, there is ambivalence in the relationship as the toddler both consciously searches for and avoids physical contact with the mother. The child wants to be close to the mother but not too close as she begins to strive for some degree of differentiation. There is a desire to be united with the main attachment figure and also a fear of being "swallowed up" by her. A conflict in the toddler becomes apparent as there is a fear of losing the love of her mother, and also losing her newfound autonomy. A toddler's sense of security of self is already intertwined with the mother's closeness. The mother and infant interact on a much higher level, now involving language and play, and separation reactions become more evident (Berk, 2013:429).

The ambivalence is evident in that the process of individuation continues in this phase, however, the child resists all forms of separateness from the mother. The toddler has to let go of the false delusion of her omnipotence and oneness with the attachment figure (mother). This process is called the rapprochement crisis (Mahler et al., 2000:77). During this crisis, the toddler becomes very sensitive to where the mother might be when she is not in the room. This process can be compared to separation anxiety, discussed previously (Sigelman & Rider, 2009:412). Toddlers find it very difficult to allow their mother to leave, and desperately cling to her. Once the mother has left, they are found to be depressed and take some time to become engaged in their environment. They are at this stage experiencing intense emotional pain (Berk, 2013:429).

For a healthy independent ego to form, it is imperative that the mother be emotionally present for the toddler in a subtle form, assisting her in her attempts at imitation and identification of the world. This process requires stable and consistent emotional involvement from the mother, forming a strong foundation for the toddler's development of cognitive abilities, reality testing, and coping around the age of two years (Mahler et al., 2000:78). Mahler et al. (2000:79) found that when mothers are emotionally unavailable, toddlers invested less energy in their own functioning and environments, and most of their energy in trying to draw the attention of their mothers. When a solid, stable foundation is formed, the toddler grows emotionally into a child with a more secure base who is able to cope with hardships and trauma more effectively.

- **Phase four: Consolidation of individuality**

During this phase, a sense of individuality is formed, and a feeling of object constancy is felt. The child's ego becomes more structured and the superego also becomes internally integrated as a result of parental demands which are internalised. Object constancy occurs when a strong, consistent and integrated inner image of the mother is formed, which makes it possible for the child to operate separately from the mother (Mahler et al., 2000:109). By the time the toddler is three years old, an even stronger sense of self is reached with stronger self boundaries. In order for this object constancy to be formed, there needs to be a strong sense of trust that develops as a consequence of the main attachment figure

regularly satisfying the needs of the young toddler. This sense of trust is still needed later on in life, in order for the child to develop a sense of inner security. For a secure base to be formed, there needs to be an internal psychic integration of the positive need satisfying image of the mother, together with a strong cognitive inner image of the mother (Sherman et al., 2015:111; Delius et al., 2008:396).

Once object constancy is formed by the toddler's third year of life, the mother can be substituted, because there is a consistent, stable internal image of her that does not change even though there are instinctual needs and discomforts (Mahler et al., 2000:109). Once this has developed, a toddler can endure longer periods of separation from the mother. Berk (2013:430) indicates that the child can use this internal image as a secure base in the mother's absence. A good object representation of the mother leads to effective independent ego functioning later on in life (Ogden, 2014:209). Since a toddler can communicate verbally at this stage, observations about the world are more descriptive, with greater interest in other children and adults separate from the mother. This internal image of the mother is important as it serves to comfort the child when the mother is not physically or emotionally present (Ogden, 2014:209).

Mahler's work lends itself to a deeper understanding of the first few years of a child's life and how significant the mother-child attachment bond is in forming a secure base. Mahler's work also clarifies the significance of the emotional and physical presence of main attachment figures for the development of healthy ego functioning later in life, in terms of interactions with oneself internally and others externally. Reciprocal mother-infant behaviours that support secure attachment will be discussed in the next section.

3.7.4 Reciprocal mother-infant behaviours associated with secure and insecure attachment

Literature on mother-infant attachment indicates that sensitive parenting is a critical aspect in the formation of secure attachment. Sensitive parenting is defined as a regular, prompt and appropriate pattern of response to an infant/child, coupled with handling the infant delicately and with caution (Berk, 2013:434; Mercer, 2015:382).

Interactional synchrony or attunement between the main caregiver and infant is important for the development of secure attachment (Mingo & Easterbrooks, 2015:471; Stern, 2002:92). The importance of sensitive, attuned parenting is evident in a study conducted by Dexter, Wong, Stacks, Beeghly and Barnett (2013:629). Seventy-four primary caregivers and their children between the ages of four and five years coming from an urban, low income environment with either African American or Caucasian descent were observed in two home visits four weeks apart (Dexter et al., 2013:629). Videotapes were used to record the Strange Situation Procedure, and parenting was assessed using a multimethod multicontext approach with home visits and laboratory sessions (Dexter et al., 2013:629). Results proved that sensitive, responsive parenting behaviour, and not race, predicted attachment as 73%

of the children were classified as securely attached (Dexter et al., 2013:629). Research has also demonstrated that the caregiver's state of mind has an impact on the quality of maternal sensitivity and the child's attachment relationship (Arnett, 2016:176; Bernier, Gagne-Matte, Belanger & Whipple, 2014:1853). Evidence has been found that sensitive fathers can also play a significant role in developing the child's exploratory system (Bernier et al., 2014:1862). With regards to the above-mentioned study, it is important to note that informal settlements in South Africa are considered to be low income environments (Aspoas & Amod, 2014:583). One must keep in mind that the ability of parents to provide sensitive care can be severely compromised in adverse conditions such as poverty, maternal depression and socio-economic difficulties, such as in informal, impoverished settlements in South Africa (Cooper, et al., 2009:1).

Studies have shown that maternal sensitivity fluctuates as a consequence of infant emotion. An infant's negative emotion impairs a mother's ability to interact with her infant in a sensitive attuned manner (Haltigan, Leerkes, Supple & Calkins, 2014:151; Martorell et al., 2014:218). Responding sensitively is difficult when an infant is continuously crying because crying is perceived as an aversive stimulus invoking stress in the mother (Haltigan et al., 2014:152; Martorell et al., 2014:219). A mother's own internal working model also affects the degree of sensitivity of response to her infant child. It has been argued that a mother's own attachment needs are evident by how she shows her own emotion, and how she responds to her infant's emotion (Haltigan et al., 2014:152). Therefore, adult attachment representations or internal working models affect the extent to which infant negative emotion is linked with specific parenting behaviours.

The importance of maternal sensitivity can be seen in the effects on children in foster care who are emotionally deprived or without a consistent attachment figure, leading to avoidance from an attachment bond (McLean et al., 2013:245). Foster children who have had multiple placements with different caregivers in their lives find it difficult to form new bonds with significant adults by the time they reach adolescence (McLean et al., 2013:245). This demonstrates the adverse effect of a lack of parental sensitivity and care, possibly leading to damage that prevents the child from forming stable, consistent and functional attachments with others (Smith et al., 2011:129).

Naturalistic studies focusing on interactions between parents and young children have helped to classify a number of parenting typologies that are relevant for the purposes of this study and are based on sensitive/insensitive parenting styles (Baker, 2014:43). These parenting typologies are: authoritative - high warmth, positive and assertive control; authoritarian - low warmth, high conflict and coercive; and democratic - high warmth, positive and engaged (Baker, 2014:43). These typologies are then connected to child outcomes. Awareness of parenting style, or which style one would possibly strive to adopt in a sensitive and attuned manner while still maintaining limits, should therefore be considered.

The causal model focusing on the quality of parent-child relationships as being causally linked to child outcomes has been critiqued because it has been found that aside from abusive parenting, variability in children's outcomes is due to genetic factors rather than environmental, psychosocial factors (O'Connor & Scott, 2007:5). The view is that as long as parenting is 'good enough', the differences in child outcomes will be due to their inherent, genetic factors and not to psychosocial factors involving parental sensitivity to the infant. Other research has been conducted on the goodness of fit between a parent's sensitivity and a child's individual temperament. Those parents who are able to self-regulate, are sensitive, patient and responsive and can handle a negative temperament in their children, promote more positive outcomes in their children (Arnett, 2016:169-170). However, recently there has been greater consensus that both genetic and psychosocial factors play a significant role in child development outcomes (Goldenring-Fine & Sung, 2014:521). Donald Woods Winnicott (1896-1971) emphasised the importance of the mother's role in child outcomes, however, held the view that "mothers did not have to be extraordinary in their duties, and that the "good enough mother" would be sufficient in facilitating the development of good mental health in her children" (Henderson & Thompson, 2011:175-176).

In summary, Tomlinson (1997) conducted various studies analysing sensitive parenting and the effects of socio-economic conditions in a South African context. It was concluded that enhancing secure attachment and sensitive parenting showed positive outcomes in terms of parent-infant attachment relationships in a developing country (Tomlinson, 1997:59). Such intervention programmes exist in a Western context but are extremely limited in the developing world (Cooper, et al., 2009:2). Developmental outcomes of infants and children who are at risk in a third world context would be improved upon by enhancing sensitive parenting, preventing behavioural problems and more widespread psychopathology in a South African society.

The caregiver's mental state as well as social aspects affecting both the child and caregiver have an impact on attention and parental sensitivity (Mckenna, 2009:16; Pallini & Laghi, 2012:160). Research has demonstrated that the duration of an infant's attention span is related to how much the infant is cuddled and soothed (Pallini & Laghi, 2012:160). A child's level of attention when measuring attachment has been broken down into three attentional systems linked with parental sensitivity, namely: orienting, vigilance and executive attention (Pallini & Laghi, 2012:160). *Orienting* involves the subject taking attention off of one object and moving it onto another, *vigilance* focuses on a subject staying focused on an object and not becoming distracted nor disconnected, and lastly *executive attention* looks at how a subject regulates their attention span, therefore a subject is able to maintain a certain level of attention and pay no attention to distracting stimuli (Pallini & Laghi, 2012:160). Secure attachment behaviours are connected to a higher degree of sensitive attentive flexibility, and negatively associated with attentive detachment and to attentive disassociation (Pallini & Laghi, 2012:169). Therefore, the secure child will give attention to the caregiver and give

attention to the object itself (Pallini & Laghi, 2012:170). Attention is also important for social referencing, referring to an infant watching and learning to understand others' emotional responses to uncertain situations, and using that information to respond appropriately to a specific situation (Arnett, 2016:173). There needs to be an awareness that both attentive abilities and cognitive performance affect the attachment between a child and a caregiver in a particular social context; a factor that emphasises the reciprocal influence of mother-infant behaviours.

Literature in infant-caregiver attachment indicates specific behaviours that are in support of sensitive parenting. These behaviours can be considered as guidelines for enhancing secure mother-infant attachment and will be discussed next.

- Touch is an integral mother-infant behaviour that facilitates positive attachment between the mother and infant (Levy & Orlans, 2014:16). Touch leads to nurturing and a feeling of containment within an infant and is regarded as one of the most powerful ways with which to establish human relationships. Sensitive, gentle, loving and caring touch facilitates secure attachment. Studies have found that without touch, children can die (Levy & Orlans, 2014:16). With abusive touch or little sensitive touch, children can develop serious biopsychosocial problems (Jennings, 2011:118). Sensory play through touch and massage strengthens the emotional areas of the brain (Jennings, 2011:36). Amongst the Dogon people of central Mali, skin-on-skin contact and touch is considered to be a normal response by the mother to signs of anxiety and anguish in her infant (Smith et al., 2011:113). In the Japanese culture, mothers spend much time touching and communicating with their infants. Touch is a universal behaviour practiced by cultures across the world, encouraging bonding between mother and child (Robinson, 2007:26).

- Eye contact and gazing is another behaviour pattern that facilitates a secure attachment style and that is associated with closeness and intimacy between the mother and infant (Levy & Orlans, 2014:16). A securely attached child communicates and bonds with her mother through eye contact. By the first week of life, a baby can already establish eye contact with the mother and try to understand her expressions (Jennings, 2011:112). The non-verbal messages of eye contact and other facial expressions are considered important forms of communication (Siegel & Hatzell, 2003:10). These non-verbal messages may reveal internal processes more clearly than words. Eye contact serves as a signal, as the mother reads the degree of the infant's gazing and head turning through the baby's eye contact (Stern, 2002:58). Insecurely attached children tend to use eye contact to manipulate, control or threaten others (Levy & Orlans, 2014:16).

- Smiling and positive affect is an instinctual, sensitive response attracting the attention of both the infant and caregiver (Levy & Orlans, 2014:16). The caregiver's gentle, caring smile and positive emotion helps the baby to feel safe, contained and secure. An infant begins to smile a few weeks after birth in response to pleasurable sensory stimulation during feeding, while being stroked or when urinating (Arnett, 2016:172; Martorell et

al., 2014:210). After four months of age, smiling is elicited by means of social interactions or sensory or perceptual stimulation, such as tickling, kissing or playing games (Arnett, 2016:172). When observing a smile on the caregiver's face, research has found that a biochemical reaction is triggered in the infant (Levy & Orlans, 2014:68). Neurotransmitters are then activated, which promotes brain growth and a general sense of well-being within the infant. Playful engagement between the caregiver and infant involves smiling, which gives the caregiver a good indication of the infant's emotions and needs (Booth & Jernberg, 2010:22). Research has found that expressions of emotion (such as smiling) and cognitive skills in different contexts differs from one cultural group to the next (Garcia Coll & Magnuson, 2000:95).

- Crying is an important infant behaviour that encourages a consistent, sensitive response to needs (Martorell et al., 2014: 219). The function of crying is to communicate any form of discomfort or unhappiness to the caregiver (Levy & Orlans, 2014:62). Four patterns of crying have been distinguished in research: the hungry cry, the anger cry, the pain cry and the frustration cry (Martorell et al., 2014: 219). Sensitive and consistent caregivers have been found to have infants who cry less (Levy & Orlans, 2014:62). An infant learns that when she cries and her needs are being met, her caregiver is dependable (Levy & Orlans, 2014:62). Crying is said to keep mother and child intimately close during infancy and facilitates bonding (Nelson, 2005:12). Crying is a behaviour found amongst all human beings in all cultures when there is a break in the attachment bond (Nelson, 2005:12). Maternal response to crying, however, differs in terms of the emotional state of the mother. Research has found that abusive mothers are more annoyed and far less sensitive towards the crying infant (Nelson, 2005:54). As a result of their broken attachments, abusive mothers have been found to be less empathic and become overwhelmed by their infant's distress. Other mothers have more of an empathic response to their infant's crying but may also reach a point at which their empathy might turn into their own pain and suffering (Nelson, 2005:54).

- Attunement and affect attunement are important behaviours facilitating sensitive parenting. In the early stages of life, infants need help from the caregiver to learn to use their emotions to negotiate the complex inter-personal environment (Holmes & Slade, 2018:25). A caregiver regulates an infant's emotions by means of understanding them first and being open to adjusting such understandings based on a child's feedback; a process that is referred to as affect attunement (Holmes & Slade, 2018:26). As a child grows, this affect regulatory process becomes internalised, and children move from co-regulation to self-regulation. Co-regulation becomes internalised as children gradually learn to cope with their own emotions. As has been stated by Winnicott (1971), the first face an infant sees is her mother's face which is the mirror in which she sees herself (Holmes & Slade, 2018:26). Brain cells called mirror neurons have been identified in neurobiological research (Martorell et al., 2014:223). Mirror neurons are activated when an infant imitates what she observes in the mother. An infant sees the world from her

mother's point of view by mirroring her activities and expressions. Mothers need to try to set aside their own emotional states and preoccupations, in order to provide their children with a springboard for understanding themselves accurately (Martorell et al., 2014:223).

- Feeding is another behaviour which encourages need satisfaction and sensitive parenting (Levy & Orlans, 2014:62). Feeding leads to positive psychosocial experiences; thereby encouraging the emotional and relational development of the infant (Levy & Orlans, 2014:69). Feeding becomes associated with skin-on-skin contact, eye contact, a soothing voice and smiling by the infant. Breastfeeding can be a part of attachment behaviour as it is a form of clinging to the mother who is close which is comforting for the infant (Levy & Orlans, 2014:69). Breastfeeding is widely practiced amongst most cultures all over the world (Smith et al., 2011:113). Amongst the Temiars in Malaysia, breastfeeding is encouraged up to the age of four years and their infants have been found to have greater hand-eye co-ordination and greater independence than their Western counterparts (Jennings, 2011:49).

- Holding is yet another behaviour which leads to healthy development, attachment and sensitive parenting. The dominant sensory system during fetal brain development is the vestibular-cerebellar system (Levy & Orlans, 2014:68). These authors indicate that rocking leads to relaxation and slowing the infant heart rate which leads to more effective gastrointestinal and respiratory functioning and decreases congestion. Research has confirmed that when babies are kept in motion their visual and auditory functioning as well as their weight gain and body control are improved. The regular movements of the mother's heartbeat are a continuous component of fetal development. After birth, a feeling of closeness to the mother's heartbeat leads to reassurance and stress reduction for the infant (Levy & Orlans, 2014:68-69). All the above-mentioned behaviours occur in what is referred to as the '*in arms'* position (Levy & Orlans, 2014:70). A baby flourishes in the arms of her mother. The '*in arms'* position creates the physical, emotional and inter-personal basis for a secure base, trust and love. As Jennings (2011:40) states, it is the encircled arms which create a circle of safety that becomes a circle of attachment once the baby is born. Encircling facilitates a ritualised containment of two people, where they are each dependent on each other and protect each other from danger or intrusion (Jennings, 2011:40). In many traditional African cultures, infants are held most of the time as they are believed to be vulnerable and need to be protected from dangers (Arnett, 2016:175). Holding is considered to comfort the child, nurture the child and make her more manageable in these cultures (Arnett, 2016:175). The Temiars in Malaysia carry their infants in a sling until they can walk properly. These infants have been found to start walking earlier than their Western counterparts, showing the positive impact of these sensitive parenting behaviours (Jennings, 2011:49).

- Face-to-face interaction is essential for communication and secure attachment in infants (Holmes & Slade, 2018:46). The goal of face-to-face play interaction is to connect and bond, as well as enjoy each other (Stern, 2002:91). Play between a caregiver and child encourages creativity, new thoughts, structures and patterns, and leads to self-realisation of the infant by means of the face-to-face interaction which occurs through the process of play (Holmes & Slade, 2018:46-47). Play facilitates healthy socio-emotional development and creates a trusting relationship between a child and her parents (Booth & Jernberg, 2010:4). Initially play is about the child experimenting with her body parts or physical objects. By the second year, the child will be practicing pretend play, after which language eventually becomes part of the playful interaction. Jennings (2011:30) describes '*The Embodiment–Projection–Role'* (EPR) that focuses on three stages of development during play. These stages need to be reached in order for there to be healthy maturation and development of the right and left hemispheres of the brain, which enhances resilience and self-confidence (Jennings, 2011:30). The first stage, '*The Embodied Stage',* leads to a healthy body image rather than a negative one, preventing eating disorders. '*The Projective Stage'* focuses on the development of good hand/eye co-ordination, literacy and artistic ability. '*The Role Stage'* looks at the child's ability to model another and copy another's role in life (be it animal or person), leading to a person playing out constructive or destructive roles (Jennings, 2011:30). The author explains that children that miss out on dramatic role playing in the first few weeks and months of their lives, live their lives enacting a series of daily destructive encounters. They are unable to become someone other than themselves and thus unable to empathise with others. However, face-to-face interaction is not valued in all societies.

  In Japanese culture, being too talkative is considered impolite as the Japanese believe it to be more polite and respectful to blend in harmoniously than to loudly draw attention to yourself. Therefore, Japanese mothers often discourage their children from talking (Arnett, 2016:204), which could minimise face-to-face interaction. In contrast, Canadian mothers encourage conversation by asking their children questions and suggesting they answer in detail; favouring individualism and self-expression (Arnett, 2016:205). This cultural belief could increase face-to-face interaction. Play is thus expressed differently in different cultures (Jennings, 2011:69). Fathers are dominantly involved in play rather than the physical care of children in Western cultures and more often engage in physical, stimulating and active play rather than the changing, cleaning and feeding of the child (Arnett, 2016:223).

  Sensitive parenting has thus been found to be the base of a secure attachment between the mother and infant. In the following section, the focus is on the long-term effects of secure and insecure attachment on child development.

3.8 THE LONG-TERM EFFECTS OF SECURE AND INSECURE ATTACHMENT

The attachment style developed in the initial stages of life has a long-term effect on many social and psychological outcomes in the child.

3.8.1 The psychosocial effects of attachment

Secure attachment during infancy predicts certain aspects of social development during childhood and adolescence, such as empathy and social competence (Egeland, 2009:1). Secure attachment predicts more optimal developmental outcomes, greater sociability, self-regulatory skills, pro-social behaviour and overall emotional and social competence, while insecure attachment predicts difficulties with regards to behaviour and relationships (Arnett, 2016:216; Cooper et al., 2009:1). Research has also demonstrated that secure attachment is a protective factor when faced with adversity (Cooper, et al., 2009:1). A number of studies have demonstrated the connection between the quality of parent-child attachment in infancy and early childhood, predicting a relationship quality with peers both in the present and longitudinally (Weinfield et al., 2008:90). Those children considered to have initially been securely attached are more likely to be popular amongst their peers and friends and to have more positive pro-social skills, rather than the ones having been insecurely attached as infants and children (O'Connor & Scott, 2007:7; Weinfield et al., 2008:90).

Children classified as insecure-ambivalent at 15 months were found to be less assertive and controlling than children who were found to be avoidant (Arnett, 2016:216; Berlin, Cassidy, & Appleyard, 2008:338; Sigelman & Rider, 2009:412). Research has indicated more clearly visible aggression in avoidant children, and that ambivalent children tend to experience feelings of loneliness by five years of age (Berlin et al., 2008:338). The more securely attached child has been found to be able to name specific good friends, whereas insecure children are unable to name any friends specifically despite professing to have many friends (Berlin et al., 2008:338). Research has proven ambivalent children to have a higher risk of internalising disorders, and avoidant children to have a higher risk for externalising disorders, although these findings are still inconclusive in the literature (Berlin et al., 2008:338). Research findings have shown that positive social experiences could support attachment security in that the more prosocial behaviour and peer contact is encouraged, the more attachment security is enhanced (Berlin et al., 2008:338). Early peer relationships lead to positive later friendship quality and peer competence (Berlin et al., 2008:338).

Insecure attachment has been found to lead to aggressive behaviour and delinquency, and have been associated with depression, anxiety and other internalising problems (O'Connor & Scott, 2007:7). Anger and aggression together with a lack of empathy have been found in children with insecure attachment histories (Weinfield et al., 2008:88). Children with resistant attachment histories have been found to have problems with anxiety, and children

with avoidant/disorganised histories display more problems with their anger and aggression both with parents and with peers (Weinfield et al., 2008:88).

In terms of the long-term psychosocial effects of secure and insecure attachment, brain development has been found to be affected by the quality of attachment relationships (Egeland, 2009:1). Secure attachment leads to healthy right brain development and neurological connections, which enhances the development of empathy and cognitive function (Jennings, 2011:29).

3.8.2 The effects of attachment on the sense of self

The sense of self is also affected by attachment style, in that infants who are effectively dependent eventually become adults who are effectively independent (Weinfield et al., 2008:86). By having their needs met, infants develop confidence in their ability to influence the world and reach their goals, which helps them to function more independently and therefore master their environments (Sigelman & Rider, 2009:419; Smith et al., 2011:116-117; Weinfield et al., 2008:86). Insecure infants develop a fear of being abandoned or of separation in times of need which persists into childhood and adulthood (Weinfield et al., 2008:87). Secure infants become children and adults who are positive about their expectations with regards to their social partners, whereas insecure infants become children and adults who are more negative about such expectations, fearing inconsistent treatment or possible rejection by social partners (Weinfield et al., 2008:89).

Further studies have provided support for the link between parent-child relationship quality and self-esteem and identity later in life (Smith et al., 2011:117; O'Connor & Scott, 2007:9). This has been a particular focus of attachment theory. A child's internalisation of their attachment experiences with their parents (internal working model) affects a child's perception of others as well as her expectations of how others would behave towards her (Cooper et al., 2009:2).

Children's self-esteem can further be enhanced by the positive effects of secure attachment on the cognitive and scholastic achievement of the individual. Whereas biology or nature gives the brain its original potential, sensitive, nurturing care leads to neurological stimulation in early life and has an effect on how the brain develops to achieve optimal capacities (Jennings, 2011:29). Research studies have found an association between parent-child quality of relationship and cognitive and educational outcomes (Baker, 2014:41). Therefore, a securely attached child has a higher likelihood of enhanced cognitive development and scholastic achievement.

3.8.3 The effects of attachment on interpersonal relationships

Secure initial attachments lead to long term attachment in adult relationships and improved health, life satisfaction, greater social interaction, and sexual gratification; thereby leading to self-development and self-realisation (Nyholm, 2015:193). Bowlby believed that the

internal working models derived from infants' first attachments are the foundation of the formation of other relationships in life and guide these relationships (Berlin et al., 2008: 334). The internal working model strongly influences a person's expectations of the emotional availability of others, therefore, depending on the attachment formed, a person expects a secure personal base later on in life or does not expect this (Berlin et al., 2008:334). Internal working models do change, develop and reformulate depending on traumas, losses, new attachment figures, and changes in the environment (Berlin et al., 2008:334). The first relationship is, however, professed to be the model as to how a personal relationship should be. It is in the early relationships a child has with others that rules regarding synchronicity, reciprocity and communication are first learned (Berlin et al., 2008:334).

As a result of early attachment, a child quickly learns what to expect of other people and from relationships, as well as how to expect to be treated by others (Weinfield et al., 2008:85). Secure infants grow up to be adults who see the world as a positive and responsive place, and themselves as deserving such respect and value. Insecure infants grow up to be adults who see the world as unpredictable and insensitive, and themselves as not deserving as much value and respect as individuals (Weinfield et al., 2008:85). These internal working models are carried over to future relationships and experiences throughout life.

Research has found that secure attachment in a personal relationship facilitates self-esteem, self-efficacy and social skills and the ability to explore the environment (Berlin et al., 2008:334). These aspects lead to fulfilling interpersonal interactions and relationships throughout one's life cycle. Positive relationships with others are facilitated by parents who make plans for their children to experience more social experiences from the start, direct and advise their children to maintain enhancing relationships with others, and display sensitivity towards others and therefore are positive role models (Berlin et al., 2008:334).

Insecure styles of attachment that are anxious (preoccupation about abandonment) and avoidant (avoidance of closeness) have been found to strongly correlate with sexual problems, conflict in relationships, and lower levels of physical and mental health (Costa & Brody, 2011:2493). Research has found that women's sexuality is adversely affected when having an insecure base, leading to an impairment of orgasm triggered by direct sexual intercourse (vaginal organism), less sexual arousal, sexual dissatisfaction, less sexual activity, negative feelings and a sense of disconnection during sex (Felton & Jowett, 2013:2493). Anxious attachment was linked to less consistency of vaginal orgasm, however to a higher frequency of vibrator and anal sex orgasms, whereas avoidant attachment was linked to a higher number of vibrator orgasms (Costa & Brody, 2011:2493).

An adult with a secure base encourages partners to explore the world and the secure partner is encouraging and non-obtrusive (Feeney, Collins, Van Vleet & Tomlinson, 2013:263). However, when there is a higher degree of attachment anxiety, the partner holds

less of a positive reaction to exploration and a higher degree of interference, whereas attachment avoidance is linked with a lack of availability to one's partner during exploration. Anxious partners rarely support their spouse purely because of the nature of their emotional connection, and often feel that supporting their spouse might take them away (Feeney et al., 2013:263). Avoidant partners focus much on their own independence, with less intimacy, often viewing their spouse as not needing support, being unreceptive or too needy (Feeney et al., 2013:264).

There are many explanations of how early attachment influences later development that are not mutually exclusive. Firstly, some research has shown links between early attachment of the infant with the mother and brain development at a neuronal level (Weinfield et al., 2008:84). Secondly, early attachment relationships are seen as serving as a foundation for emotional self-regulation. The way in which mothers discuss emotions with their children has been found to be integral with regards to children developing social competence and having positive relationships with others later on in life (Berlin et al., 2008:334).This involves individuals being able to contain and regulate emotion in an adaptive way, later on with their own children and in personal relationships (Horenczyk et al., 2015:339; Weinfield et al., 2008:84). A third effect of early attachment relationships is the promotion of adapting abilities and skills to develop behavioural synchrony with others (Leerkes et al., 2015:94; Weinfield et al., 2008:85). By means of observing the attachment figure, the infant models how to behave in a relationship (Mingo & Easterbrooks, 2015:471; Weinfield et al., 2008:85). Sensitive and responsive behaviour teaches the infant that effective communication relies on the partner's cues and responses. Insensitive and unco-ordinated interaction teaches the infant that communication is not a responsive interaction between two people, which will have negative consequences in the future. Imitation is thus important for learning social cues for future relationships (Horenczyk et al., 2015:339).

In conclusion, there have been many findings validating the predictability of attachment behaviour and style later in life as a consequence of initial attachments, proving predictable effects of secure and insecure attachment. A more drastic effect of a break in early attachment leading to an insecure base of self is the development of an attachment disorder.

3.8.4 Attachment disorders

Insecure attachment styles have been identified as risk factors for the development of psychopathology in adults, and are considered to be a psychological variable that affects the severity of symptoms leading to psychosocial deficits in many of the Axis 1 disorders (Ringer et al., 2014:210). The DSM (diagnostic and statistical manual of mental disorders) clusters each psychiatric diagnosis into 5 axes (dimensions). Axis 1 disorders include anxiety and mood disorders, schizophrenia and psychosis. There has been a high prevalence of insecure attachment style in individuals with schizophrenia (Ringer et al., 2014:210). It has been found that individuals with insecure attachment styles have less social support and internal

resources to cope with traumatic symptoms experienced such as early life difficulties, poverty, trauma, and psychosocial losses (Ringer et al., 2014:210; Zeanah & Gleason, 2015:207). The extreme psycho-socio-economic circumstances in which many children are raised in South Africa (Aspoas & Amod, 2014:583), could lead to trauma and breaks in initial attachments, and ultimately to a society with people having more psychosocial problems.

Attachment disorders were initially defined as a separate category in the third edition of the DSM (DSM III) (Zeanah & Gleason, 2015:207). The criteria were then refined and revisions to the criteria were made without sufficient relevant research up until 1998. Currently, wide consensus exists on attachment disorders being derived from inadequate caregiving; encompassing two clinical patterns (Zeanah & Gleason, 2015:207). The first is an emotionally withdrawn, inhibited type, and the second is an indiscriminately social, disinhibited type (Woolgar & Baldock, 2015:34; Zeanah & Gleason, 2015:207). Research on attachment disorders in young children has been carried out by means of assessing signs, with continuous measures of maltreated and/or institutionalised children. The DSM V designations of Reactive Attachment Disorder (RAD) and Disinhibited Social Engagement Disorder (DSED) (Pignotti, 2011:30; Woolgar & Baldock, 2015:34) shall be described below.

3.8.4.1 Reactive Attachment Disorder (RAD)

Reactive Attachment Disorder is evident in children who have experienced repeated changes of primary caregivers, limiting the opportunity to form stable attachments. It is also found in children raised in unusual contexts, which limits the opportunity to form selective attachments (Taft, Schlein & Ramsey, 2015:237-238). Such children become emotionally withdrawn, with a dampened positive affect. Children with RAD display regular social and emotional disturbance characterised by little social and emotional responsiveness to others, with a limited positive affect, and periods of unexplained irritability, sadness or fearfulness evident when interacting with most adults (Woolgar & Baldock, 2015:35). Such children display an absence of focused attachment behaviours directed towards a caregiver, inability to look for and respond to comforting behaviour when distressed as well as less social and emotional reaction and positivity. These children have experienced extreme social and emotional neglect, where basic needs for nurturing or comfort are unfulfilled (Zeanah & Gleason, 2015:208).

3.8.4.2 Disinhibited Social Engagement Disorder (DSED)

The Disinhibited Social Engagement Disorder is a condition where the child would have experienced social neglect or deprivation with basic emotional needs not being properly fulfilled (Stevens, 2014:124). Behaviour is characterised by the child actively approaching and interacting with unfamiliar adults, inappropriately exhibiting very little restraint, together with a willingness to wander off with strangers (Zeanah & Gleason, 2015:208). The child would display overly familiar verbal or physical behaviour which is culturally inappropriate and not age-appropriate, thus portraying a lack of appropriate social and

physical boundaries. This child actively seeks close physical contact and, as the child reaches pre-school, begins to ask inappropriate overly familiar questions. Behaviour is much like ADHD but not limited to impulsivity and includes socially disinhibited behaviour (Zeanah & Gleason, 2015:208).

3.8.4.3 Coercive therapeutic approaches applied to treat attachment disorders

Research has found that a break in early attachment in the life of adopted children, results in them presenting with behavioural and emotional symptoms leading to a probability of psychopathic behaviour if no therapeutic intervention is received (Pignotti, 2011:30). Invasive and coercive techniques have been implemented to treat such disorders involving holding, binding or rib-cage stimulation (tickling, pinching, knuckling) (Pignotti, 2011:31). Children can be held down or contained by having a few adults lying on top of them, or have their faces held to encourage prolonged eye contact, with a session that can last three to five hours or possibly even longer (Pignotti, 2011:31). These therapies are believed to bring catharsis together with a release of anger, but have proven to be rather controversial and dangerous where a child was smothered to death in a session intended to have her relive her birth. Such therapies are thus considered to be harmful as a result of the deaths and injuries that have occurred. Proponents of such attachment holding therapies have claimed, without much success, that they are more effective than other traditional behavioural therapies (Pignotti, 2011:31). There is, however, a split in opinion between child development researchers and clinicians in this regard.

3.9 CONTEXTUAL FACTORS THAT INFLUENCE ATTACHMENT

The broader social context surrounding a caregiver and infant affects how they react to each other. The stresses linked to living in poverty, cultural differences or marital, inter-personal difficulties will impact the degree of sensitive care a parent can provide (Tomlinson, et al., 2005:1045; Whitcomb, 2012:273). The emotional and physical availability of a consistent caregiver is critically important, and the quality of caregiving needs to be considered despite the context in which attachment develops (Bick & Dozier, 2013:95). Family circumstances such as single parent homes and divorced or separated parents also have a strong impact on attachment across all cultures (Bain, 2014:593; Mckenna, 2009:36; Tomlinson et al., 2005:1044-1045). More specifically, contextual factors impacting on attachment are culture, socio-economic factors such as poverty, homelessness, HIV leading to maternal depression, secondary figures of attachment (extended family members, fathers and/or caregivers, grandparents), the environment and the parents' social setting (O'Connor & Scott, 2007:4; Bain, 2014:593).

3.9.1 Psychosocial factors that affect attachment

Apart from individual factors that influence attachment such as the personality and mental health of the mother or caregiver and the temperament of the infant, negative conditions in the wider social environment could influence the mother-infant attachment bond (Louw & Louw, 2014:135-136). These factors include poverty, deprived care environments, child maltreatment and unwanted pregnancies, amongst others.

3.9.1.1 Extreme poverty

Extreme poverty is another global social problem in non-Western countries such as India, where poverty leads to the consumption of inadequate and low nutrition food, causing poor health conditions amongst children (Dhar, 2012:24). Malnutrition is a severe social, health and medical problem amongst infants across the world that has severe and enduring effects (Arnett, 2016:139). Child labour is another social problem said to have arisen as a consequence of poverty, prioritising the parental attitude to be one of maximising the household income by means of having large families and compelling children to work for their livelihood (Dhar, 2012:25). In developing countries, poverty was found to be the primary cause of child labour. Low family income has been linked with attachment insecurity in studies, despite cases where low-income families still have been found to have securely attached children (Mckenna, 2009:36-37)

3.9.1.2 Deprived care environments

Research has found that developmental trauma will affect children who have suffered from abuse, neglect or deprivation and will manifest in problems in their attachments to others (Purvis, Mckenzie, Cross & Razuri 2013:165). Post-institutionalised children in Romania who lived in resource poor and deprived care environments, were found to have brain regions which were functionally deficient (Jennings, 2011:20; Purvis et al., 2013:165). These children had decreased metabolic activity in the brain regions that are responsible for processing emotionally significant stimuli. The development of these brain systems depends on sensitive and responsive caregiving, which is absent in deprived settings (Purvis et al., 2013:165). This research provides support for an association between deprived settings in early life and increased hyperactivity and behaviour disorders (Purvis et al., 2013:165). Therefore, sensory deprivation in early life as a result of neglect or absence causes deficits in sensory processing in the brain, preventing the formation of a secure base and attachments (Purvis et al., 2013:165).

It is argued that economic factors have had an impact on attachment since work has taken mothers away from their children in the Western world (Flanagan, 2002:88). Many children are being cared for in day-care settings. Research indicates that long hours in day-care and a lack of adequate caregiving in these settings, together with parental stress due to their work, might put infants at risk for insecure attachment. (Berk, 2014:442). However, research

studies indicate that high quality day-care, where caregivers are sensitive, nurturing and consistent, tend not to adversely affect the development of secure attachment. In this regard, the distinguishing factor appears to be the quality of day-care more than the care of the child by someone other than the mother (Berk, 2013: 442-443).

3.9.1.3 Child maltreatment

Child maltreatment is a severe social problem globally, and abused infants and children are considered vulnearable and at risk (Casanueva, Goldman-Fraser, Ringeisen, Lederman, Katz, & Osofsky, 2010:557). Studies have demonstrated that increased intervention is required in cases of domestic violence when mothers have experienced abuse or intimate partner victimisation to decrease the likelihood of the cycle of child abuse continuing (Berlin et al., 2011:162; Casanueva et al., 2010:557). Research on the maternal risk factors connected to child maltreatment is mostly focused on poverty and substance abuse (Casanueva et al., 2010:558). Child abuse, neglect and labour clearly violate children rights but are still significant social problems in India (Dhar, 2012:23). Research has found that abuse, neglect and exploitation in India is most prevalent amongst children between five and 12 years of age (Dhar, 2012:24). Childcare arrangements amongst low-income construction workers in India are problematic where infants are often taken to their parent's work, and children between five to 10 years are left alone at home (Dhar, 2012:24). Cross-cultural research has found that in many cultures once infants are six months, their care is passed on to older sisters usually between six to 10 years of age (Arnett, 2016:175). This allows mothers to focus their attention on work. Although it is usually an older sister who is left with the infant, sometimes it is the older brother, cousin or grandmother who takes care of the infant, a common practice in developing countries across the world (Arnett, 2016:175).

3.9.1.4 Unwanted pregnancies

Unwanted pregnancies across the world are another social problem affecting attachment. In the United States, most teenage pregnancies are unplanned (Gomez-Scott & Cooney, 2014:648). There is much debate on the consequences of either carrying an unintended pregnancy or its termination. Teenagers in the United States who chose to have their babies reached fewer of their educational goals, experienced welfare dependence, and were found to have difficult partner relationships (Gomez-Scott & Cooney, 2014:648). In Nairobi, Kenya unwanted pregnancies were due to conception occurring in socially unaccepted contexts for motherhood or in contexts showing a woman's sexuality in a culturally unacceptable form (Izugbara, Ochako & Izugbara, 2011:1031). Women and girls in Kenya have very little access to contraception and general family planning services (Izugbara et al., 2011:1031). There is growing female poverty in Kenya coupled with restrictive abortion policies, leading to a large number of unwanted pregnancies (Izugbara et al., 2011:1031). The effects of these unwanted pregnancies on attachment are a continuing problem. Attempts to cope with negative conditions without sufficient social support, often result in maternal caregiving

characterised by insensitive, unresponsive, and intrusive maternal behaviours, and the inability to help their infants with emotinal regulation (Louw & Louw, 2014:136).

3.9.1.5 Maternal depression

Maternal depression, whether post-partum depression or persistent depression, has been found to be a risk factor in the development of secure attachment in infants (Berk, 2013:434; Louw & Louw, 2014:136). Post-partum depression is a clinical depression and can last over months and years (Sigelman & Rider, 2009:113). It has been found that mothers who are depressed tend to be less responsive to their infants as they are often tired and lack the energy needed to respond to infant cues. Infants and older children of depressed mothers have been found to be less securely attached and present with more behavioural problems (Sigelman & Rider, 2009:113).

A core aspect of this study relates to the possible influence of culture on the mother-infant attachment bond. This aspect is discussed in the next section.

3.9.2 Socio-cultural factors that influence attachment

Research studies indicate that attachment behaviours are influenced by specific child rearing patterns that dominate in a particular culture (Garcia Coll & Magnuson, 2000:99-100; Louw & Louw, 2014:13; Robinson, 2007:25). Although cross-cultural researchers have found that a worldwide set of attachment behaviours may exist amongst infants across many cultures, the selection, shaping and interpretation of these behaviours seem to be culturally determined (Robinson, 2007:25).

3.9.2.1 Culture

Culture is defined as a specific set of meanings or mental schemata (images) that is shared by a group of people or a recognisable segment of the population (Garcia Coll & Magnuson, 2000:97). These different meanings are learned, shared and transmitted from one generation to the next within a population. Culture is given power by values and beliefs that are put into action by means of daily interactions with people in the community (Garcia Coll & Magnuson, 2000:97; Louw et al., 2014:13; Mckenna, 2009:26). Garcia Coll and Magnuson (2001:97) indicate the link between the concepts *culture* and *ethnicity* in that ethnicity refers to "a group defined by a common nationality, culture, or language" whereas culture refers to "a distinct system of meaning or a cognitive schema that is shared by a group of people … learned, shared and transmitted generationally within a population." Culture therefore determines people's way of life, such as their family life, behaviour patterns and beliefs (Robinson, 2007:5).

In the literature, a prominent distinction in different cultures is the focus on individualistic versus collectivist cultures. Individualist cultures, such as in North America and Western European societies, emphasise individuality and self-reliance, whereas collectivist cultures,

such as in Africa, Asia and Latin America, emphasise interdependence and social harmony (Sigelman & Rider, 2009:327).

African culture is seen as a collectivist culture, with their worldview embedded in *ubuntu*; a concept referring to the interdependence among people (Louw et al., 2014:32). In the African collectivist worldview, the individual's identity is based on the family and community and their development strongly related to their kinship relationships.

In the context of this study, it is important to note that culture has an influence on infant caregiving practices (Arnett, 2016:174). In this regard, certain characteristics of child rearing have been found to be dominant in developing countries, for example infants sleeping with their mothers, daily caregiving done by older female siblings, multiple caregiving, carrying practices and excluding fathers from the care of infants in the first year of life (Arnett, 2016:175). Culture has also been found to have an influence on the socialisation of children. For instance, in African cultures, research has found that the needs of the group are considered more important than those of the individual. As a result, children are expected to do errands at young ages and are expected to take care of their younger siblings (Louw et al., 2014:14). These children have been found to display more nurturing behaviour than children who spend more time with their peers, as in Western countries where more attention-seeking and competitive behaviours are displayed (Louw et al., 2014:14).

Culture is also seen as an important factor that influences mother-infant attachment (Rothbaum et al., 2002:328). It has been found that the transmission of attachment styles from one generation to the next can been linked to child-rearing practices that are culturally driven, such as communal sleeping. These child rearing practices may have a stronger impact on attachment than the parent's attachment representations and sensitive responsiveness (Keller, 2015:177; Martorell et al., 2014:233; Van Ijzendoorn & Sagi-Schwartz, 2008:892).

It is significant to note that culture affects attachment behaviours of both mothers and infants (Keller, 2015:183). "Normal" attachment behaviours, according to Euro-American middle-class culture commonly focus on the mother and infant, while multiple caregiving arrangements are normal in many non-Western contexts which comprise most of the world, as in South Africa (Keller, 2015:183; Mckenna, 2009:45-47). In Sub-Saharan African cultures and in India, exclusive mothering is an exception (Keller, 2015:182). These cultures employ a social relational model where the infant is embedded in multiple, complex social networks from conception onwards and thus have numereous figures of attachment. Cameroonian people also practice multiple caregiving arrangements (Keller, 2015:183).

The concept of stranger anxiety, used to analyse styles of attachment, can be interpreted differently in Western and non-Western contexts as in the latter contexts, infants are exposed to multiple caregivers and socialised in this context from early on (Tomlinson, 2001:42). With the Beng people in West Africa, children are taught to behave in a warm and

friendly manner towards strangers (Keller, 2015:184). Infants are socialised into welcoming all strangers from birth, thus no Beng infants really show behavioural signs of stranger anxiety. A similar welcoming attitude has been found amongst Brazil's Piraha people (Keller, 2015:184). These cultures therefore experience stranger anxiety differently to certain Western cultures.

Fernando (1991, in Robinson, 2007:5), however, argues that one should steer away from regarding culture as fixed. Rather, culture should be considered as fluid and subject to change; generally known as the process of acculturation.

3.9.2.2 Acculturation

Acculturation is defined as the extent to which an individual maintains his/her culture of origin or adapts to a new society's culture (Garcia Coll & Magnuson, 2000:97). There are processes that have an impact on acculturation, such as urbanisation and exposure to media (Polek, 2007:5). In the ecological systems theory, acculturation can be linked to the chronosystem, explaining changes in the environment that impact culture and affect mother-infant attachment behaviours (Berk, 2014:28).

The effects of acculturation have been researched across the world, focusing on the impact of culture on the immigrants of a country (Jacomijnitje, 2009:7). Research has found that people living in a new culture have to decide whether it is important to maintain their traditional culture, or whether it would be more important to assimilate with the larger society and have more positive relations with people in the 'new' society. New people in a society may switch from one of these strategies to another (Jacomijnitje, 2009:9-10). Cultural diversity is sometimes seen as diffusing cultural traditions and practices and thus as negative, whereas at other times it is viewed as positive, leading to minority and majority groups being integrated in a country and supporting each other (Jacomijnitje, 2009:7).

There will therefore be variation regarding which aspects of the traditional culture individuals and populations maintain, and which aspects of the new culture are integrated. This variation implies that different family members could be at different levels of acculturation at a similar point in time (Garcia & Magnuson, 2000:99). It is significant to keep in mind that cultures are dynamic and changing with an influx of new ideas as a result of the global changes in societies and family environments (Codrington, 2008:2). The process of acculturation leads to changes in beliefs, values and practices that can affect mother-infant attachment behaviours (Mawani, 2001:19). Research has shown that certain values such as increased freedom for women, differences in views regarding respect, and adapting the value that is placed on independence versus dependence to the new context, can be modified due to acculturation (Garcia Coll & Magnuson, 2000:99; Mawani, 2001:19).

At this point, it is significant to consider Bronfenbrenner's focus on how ecological contexts affect psychological growth and health (Guckin et al., 2013:38; Vicedo, 2017:7). On a micro,

meso and macro level, mothers in urban settings have been influenced by Western child rearing practices in multiple contexts beyond the immediate family (Amoateng & Kalule-Sabiti, 2013:134; Chau-Ying Leu, 2008:18). It is important to consider these different layers and systems in the environment, each having an effect on a child's development, and on the integration of local and Westernised practices of child rearing that are adopted by many South Africans (Mawani, 2001:19).

Various examples of diverse socio-cultural practices with regard to mother-infant attachment will be provided in Chapter 7, as background information to the development of the attachment-based parenting programme and measuring instrument in this study.

3.10 SUMMARY

This chapter has provided a theoretical overview of how attachment between a mother and infant is conceptualised by means of defining attachment and describing specific maternal and infant attachment behaviours. In order to provide a clear description of the conceptualisation and formation of attachment, Bowlby's ethological theory of attachment as well as Mahler's stages of attachment have been elaborated on in-depth. Global contextual factors that affect mother-infant attachments have been discussed in this chapter to provide a holistic understanding of the context of mother-infant attachment.

In chapter 4, the various Western measurements of attachment together with attachment focused programmes are reviewed. The applicability of these programmes and measuring instruments in a South African context are discussed, and this provides a basis for the development of the programme and measuring instrument in this study.

CHAPTER 4

LITERATURE REVIEW ON THE MEASUREMENT OF ATTACHMENT AND ON ATTACHMENT PROGRAMMES

4.1 INTRODUCTION

In this chapter, various internationally applied measurement instruments of attachment and their indicators are discussed. In addition, a number of attachment-based programmes are explored, and different methods of instruction in facilitating attachment-based programmes are discussed. The information will provide a theoretical basis to gain insights into approaches that might be applicable to developing an attachment-based parenting programme and a measurement instrument relevant to a South African context.

4.2 MEASUREMENT OF ATTACHMENT

A review of the literature provides information on a number of standardised measurement instruments of attachment developed in the Western world: The infant Strange Situation Procedure (SSP), The Infant CARE-Index, The Marschak Interaction Method (MIM), The Attachment Q-Sort Test (AQS), The Still Face Procedure (SFP), The Maternal Attachment Inventory (MAI), The Adult Attachment Interview (AAI), The Transition to Adult Attachment Interview (TAAI) Questionnaires, and The Adult Projective System (APS) (Bojanewski & Ammen, 2011:1-2; Minde & Minde, 2006:547). Specific training is required before an individual can professionally code these measures and ethically apply the results to a study.

These instruments seem to be developed and widely applied in the Western world. The researcher firstly describes the instruments that are relevant to mother-infant attachment, and subsequently describes instruments that focus on the measurement of attachment in adolescence and adulthood. In addition, a discussion of the INTAKT measuring instrument (Hirshmann, Kastner-Koller, Deimann, Aigner & Svecz, 2011) will be discussed. This instrument focuses on the quality of mother-infant interactions that are seen as beneficial to the holistic development of the child.

4.2.1 The Infant Strange Situation Procedure

The Infant Strange Situation Procedure (SSP) was developed by Mary Ainsworth and aims to observe secure base behaviours of mothers and infants between the ages of 11 and 15 months. It is one of the most commonly applied measures of attachment and is used to classify children as securely or insecurely attached (Berk, 2013:430; Farnfield et al., 2010:319; Smeekens, Riksen-Walraven & Van Bakel, 2009:369). The SSP is implemented in a room with a video camera connected to a television monitor in another room (Farnfield et al., 2010: 319). The session is facilitated through eight three-minute episodes with stress levels slowly increasing and culminating in the infant when a stranger enters, when the infant is being left alone without the mother and with a stranger; all whilst being viewed on

the screen in the next room (Berk, 2013:430; Farnfield et al., 2010: 319; Keller, 2015:184). The SSP therefore analyses how an infant copes with heightened anxiety and stress with and without the mother's presence, and the manifestation of stranger anxiety (Farnfield et al., 2010: 319).

The different styles of attachment that are measured in the SSP are characterised by various degrees of attention flexibility, which focuses on the attention between mother and infant, as an indicator (Pallini & Laghi, 2012:159). A securely attached infant will look for proximity with the main caregiver in times of stress and when the caregiver separates, and after being reassured by their reunion shall return to explore the environment (Smeekens et al., 2009:369). An insecure-avoidant infant will display fewer attachment behaviours towards the main caregiver while under stress, presumed to be as a consequence of the caregiver not being as sensitive towards the infant outside the laboratory setting of the SSP (Smeekens et al., 2009:369). The insecure-resistant infant displays clingy and angry behaviour towards the main caregivers when under stress; here, the caregiver is presumed to be inconsistent in her responses. The disorganised insecure infant has no strategy for her attachment behaviours in times of stress (Smeekens et al., 2009:369).

Stranger anxiety varies depending on how exposed toddlers have been to diverse caregivers (Arnett, 2016:215). Further research testing the cultural validity of the Strange Situation amongst African Americans with a common experience of multiple caregiving has been conducted, and found that African-American infants are not perturbed by the setting or the stranger (Arnett, 2016:175; Tomlinson, 1997:118). It was found that such infants are predisposed to be outgoing but still attached to their parental figures (Keller, 2015:182; Tomlinson, 1997:118). An African-American infant will still explore the environment happily, even at reunion with the mother. The same applies with Cameroonian Nso people who take on strangers immediately into their communities in a friendly manner (Keller, 2015:182). Infants from these communities, once again, have proven not to show negative reactions to the presence of a stranger, regardless of proximity of the stranger to the infant.

Therefore, socialisation experiences in multiple caregiving, non-Western contexts adapted to contextual demands differ from those in the developed world in terms of how the mother teaches her infant to cope with strangers, and therefore how to react to strangers (Arnett, 2016:215; Keller, 2015:184). Even though multiple caregiving is common in South Africa, there has been little research on how this influences the behaviour of infants in the Strange Situation (Tomlinson, 1997:118).

In a similar way, it is possible that behaviours associated with maternal sensitivity may vary in different socio-cultural contexts. In a recent South African study on measuring maternal sensitivity within a cultural context, it was for example found that the scale developed by Ainsworth seemed to be more appropriate to cultural contexts where verbal interaction between mothers and infants was more culturally appropriate and normative (Dawson, Bain & Mesman, 2018:7).

4.2.2 The Marschak Interaction Method

The Marschak Interaction Method (MIM) was developed by Marshak (1958) and is a structured observation method of parent and child that aims to assess the nature and quality of the relationship between an infant and her caregivers (Bojanewski & Ammen, 2011:1-2; Booth & Jernberg, 2010:8). This assessment tool is unique to Theraplay, a therapeutic form of play used in therapy between parent and child, aimed at building an attuned emotional connection. An infant's experience of being nurtured forms the basis of the process of treatment (Booth & Jernberg, 2010:8). The parent's emotional connection to the child and the reciprocity between the parent and child are examined in this method as important indicators of the quality of attachment (Bojanewski & Ammen, 2011: 2).

In the MIM, the caregiver and child are video recorded as they interact and play together while engaging in a number of set activities (Booth & Jernberg, 2010:7). The observer will observe the video and provide feedback to the parents in a feedback session while they view selected parts of the video. The intention is to allow the parent to stand outside the process and better understand their interaction with their infant/child, and to encourage reflection on their interaction. Corrective experiences for the child and caregiver are then provided during Theraplay (Bojanewski & Ammen, 2011: 2).

Both a parent's and child's abilities are evaluated in terms of set tasks designed to encourage behaviours which are grouped into four categories consistent with the Theraplay model, namely structure, engagement, nurturing and challenging (Bojanewski & Ammen, 2011:1; Booth & Jernberg, 2010:21). Structure refers to parents being consistent and predictable, enabling the child to trust the parent. The parent provides a sense of safety and organisation for the child and assists the child in emotional regulation. Engagement refers to a parent being attuned to a child when engaging in playful experiences. The parent therefore forms a strong bond with the child which leads to stimulation, arousal and enjoyment. Nurturing refers to parents responding sensitively to a child's needs by creating a sense of safety, which leads to positive feelings of self. Nurturing helps to regulate a child's needs and feelings. Challenge refers to the parent encouraging the child to explore the environment and to master certain skills. Challenge also refers to the parent teaching the child to take risks and to feel confident (Booth & Jernberg, 2010:21). The treatment plan is based on these evaluations focusing on observations of the parent and child during play.

Practitioners apply the MIM as a measure of assessment before initiating the Theraplay model of intervention (Bojanewski & Ammen, 2011:1).

4.2.3 The Infant CARE-Index

The Infant CARE-Index was developed by Pat Crittenden under the direction of Mary Ainsworth and John Bowlby (Farnfield et al., 2010:318; Hirschmann et al., 2011:299). The Infant CARE-Index aims to assess the dyadic synchrony or fit between the caregivers and

child in a laboratory type setting. Adult sensitivity to the infant is assessed in terms of responsiveness or control. These indicators are understood as the degree to which the mother is responsive towards the infant when a physical or emotional need is expressed by the infant, as well as the degree of control the mother exerts over her infant when there is an attempt to explore the environment.

The Infant CARE-Index is used to measure and assess caregiver responsiveness and control while playing with the infant in a normal fashion for approximately three minutes. The caregiver selects the toys and the nature of play (Farnfield et al., 2010:318). The play interaction is video recorded. The interaction is then coded in terms of four patterns of behaviour in the caregivers, namely cooperation, compulsivity, difficulty and passivity, and four patterns of behaviour in the infant, namely cooperation, compulsivity, threatening, and disarming behaviour (Farnfield et al., 2010:318). The infant's patterns of behaviour are understood as cooperation of the infant with the mother, compulsivity of the infant behaviours in her responses to the mother and assessing whether the infant seems threatened and disarmed by the mother's behaviours. The mother's patterns of behaviour are assessed in terms of the mother cooperating with her infant in an accurate sensitive manner, or rather being difficult or passive towards her infant when needs are expressed.

Assessments have been carried out by Crittenden, Claussen and Kozlowska (2007:78), where the Infant CARE-Index was applied to measure maternal sensitivity during a mother-infant play session. In this measure, adult behaviour is scored for the three constructs, namely sensitivity, control and responsiveness (Farnfield et al., 2010:318): sensitivity in terms of warm, nurturing and attuned maternal behaviour towards her infant; control in terms of how much control the mother exerts over her infant when she explores; and responsiveness in terms of how quickly and sensitively the mother responds to her infant. Low maternal sensitivity is associated with anxious attachment in infancy (Crittenden et al., 2007:81). Infant behaviour is scored on patterns/styles of interaction as either secure, avoidant, ambivalent, controlling or coercive (Crittenden et al., 2007:84).

The Infant CARE-Index is a Western measurement instrument of attachment, focusing on the mother and infant in isolation without much consideration of cultural variations in attachment practices and socio-economic differences that may affect maternal sensitivity (Farnfield et al., 2010:318). It is performed in a clinical laboratory setting not appropriate for most mother-infant dyads in the developing world. This measurement instrument would thus benefit from research of its clinical usefulness in a wider range of cultures (Farnfield et al., 2010:318).

4.2.4 The Attachment Q-Sort Test

The Attachment Q-Sort Test (AQS) was developed by Waters and Dane (1985) (Minde & Minde, 2006:547; Madigan, Brumariu, Villani, Atkinson & Lyon-Ruth, 2016:370). This measurement aims at observing mother-child interactions in the home. It is not like the SSP

or Infant CARE-Index in that there are no artificial mother-infant separations and a laboratory setting is not used, and protocols can also be scored without extensive training (Minde & Minde, 2006:547). The AQS can be repeated as often as required and can be used over a much wider age range than the SSP (Cadman, Diamond & Fearon, 2018:2).

This measurement instrument is implemented by using ninety cards that describe specific behavioural characteristics of children between the ages of 12 and 48 months (Minde & Minde, 2006:550). The cards range from *'most descriptive of the child'* to '*least descriptive of the child*' (Cadman et al., 2018:2). A range of dimensions that reflect either the secure base phenomenon itself (defined as a balance between exploration and proximity seeking) or other associated behaviours such as dependency, affectivity, social interaction, object manipulation and social perceptiveness, are then observed with the use of these cards (Cadman et al., 2018:2). This test has not been as widely applied because home visits are time-consuming and impractical for clinical use (Minde & Minde, 2006:547).

In the AQS test, the indicators focused on include sharing, comforting behaviours, exploring the environment, separation and proximity from the mother, the level of crying, maternal sensitivity, quality of play, tracking behaviours, voice tone, and level of activity (Smeekens et al., 2009:369).

The Maternal Behaviour Q-Sort mini test (MQMS) applies items of behaviour between mother and infant (Dawson et al., 2018:1). These items focus on the pace of interactions set by the mother rather than according to the infant's responses. The items focus on whether the mother appears to disconnect and be unaware of the infant's bids for attention; whether the mother accepts behaviour even when it is not consistent with her wishes; whether the mother reprimands her baby or notices when her baby smiles or vocalizes; the mother's level of distress concerning the infant's demands; and, lastly, whether the mother tracks the baby's activities during the visit (Dawson et al., 2018:1).

Studies have proven that the AQS shows comparative convergent validity as the SSP with measuring attachment styles, and that it is a valid measure of infant attachment across cultures (Cadman et al., 2018:2).

4.2.5 The Still Face Procedure

The Still Face Procedure (SFP) consists of three separate episodes (Conradt & Ablow, 2010:252). The first is the '*face-to-face play episode'* which involves asking mothers to engage in normal play with their infants for two minutes using their voice and hands (Conradt & Ablow, 2010:252; Haltigan et al., 2014:156). The next episode is the '*still-face episode,'* which involves the mother no longer playing with her infant and maintaining a still face for the next two minutes. The last episode named '*the reunion episode'* involves resuming play and interaction for the last two minutes (Conradt & Ablow, 2010:252; Haltigan et al., 2014:156). In order to measure maternal behaviours, mutually exclusive

categories of maternal behaviours are developed, and the amount of time the mother engages with the infant in the reunion episode is measured while coders are blind to other data (Haltigan et al., 2014:157). The categories are as follows: maternal behaviours such as maternal engagement, where the mother interacts with and plays with her infant and maintains eye contact; maternal intrusiveness where the mother imposes her own agenda and actively blocks the goal of the infant by not following her needs; maternal non-responsiveness when the mother watches the infant without interacting with her; and maternal withdrawal where the mother moves away from the infant entirely and stops interacting with her (Haltigan et al., 2014:157; Mesmen, Van Izjendoorn & Bakermans-Kranenberg, 2009:120).

The Still Face Procedure aims to measure the extent to which the mother is sensitive to the infant's cues and shows an awareness of the infant's well-being and happiness by being able to adjust her own behaviour accordingly. The Still Face Procedure has been useful in studying infant emotional regulation and dyadic interactive characteristics between the mother and infant (Conradt & Ablow, 2010:251; Mesmen et al., 2009:120). The SPF has also been useful in demonstrating the importance of the mother assisting the infant in regulating emotion.

Based on the Still Face Procedure, it has been found that higher maternal sensitivity predicts infant positive affect (Mesmen et al., 2009:120). Studies concerning the infant during and after the still face episode have found reduced positive affect and gaze in the infant coupled with an increased negative affect directly after the procedure (Mesmen et al., 2009:120). Insufficient research has been conducted on the Still Face Procedure with people from diverse socio-economic backgrounds to understand the link between socio-economic status and adult-child attachment states of mind, as well as how concrete the link is between attachment states of mind and maternal sensitivity (Haltigan et al., 2014:157).

Some instruments focus on the measurement of attachment in older children and adults. These instruments explore their views of childhood attachment experiences or existing attachment patterns, as will be discussed next.

4.2.6 The Maternal Attachment Inventory

The Maternal Attachment Inventory (MAI) has been widely adopted for measuring maternal-infant attachment (Chen, Sung, Chen, Chang & Lee, 2013:2687). Participants with infant babies are requested to complete a questionnaire (Chen et al., 2013:2689). The indicators include the length of early stage contact, parental perception of infants and type of interactions between the parent and infant during feeding, parental discussions about the infant and parental evaluations of infant behaviour when the parents are under stress (Chen et al., 2013:2688). In the Chinese version of the MAI, the indicators include body language such as looking into the infant's eyes; how the main caregiver feels when her baby smiles; whether the caregiver comforts her baby when she cries and feels warmth and

happiness when with her baby; whether the caregiver feels love for her baby and gives her special attention; and whether the caregiver feels that she knows her baby's signals and looks forward to being with her baby (Chen et al., 2013:2691).

4.2.7 The Adult Attachment Interview

The Adult Attachment Interview (AAI) aims at understanding the impact of people's childhood attachment experiences on their adult personality (Farnfield et al., 2010:323; Steele & Steele, 2008:323; Zeanah et al., 2011:824). The AAI is implemented by means of conducting an interview which is accompanied by a technical manual for carefully rating and classifying interview responses from adults. The responses are coded and provide information on how adults think and feel about their childhood attachment experiences (Steele & Steele, 2008:323). The underlying premise of this attachment measurement is that the ability to show an organised, consistent and credible valuing of attachment relationships demonstrates a secure attachment style that leads to stable mental health outcomes and relationships later in life (Steele & Steele, 2008:323).

Due to the fact that the AAI allows for deviation from strict research administration protocols, allowing the researcher to pursue more details about important issues, it can be applicable in assessing attachment and emotional regulation of caregivers in a variety of different cultures (Zeanah et al., 2011:825). Van Izjendoorn and Bakermans-Kranenburg (2010, in Haltigan et al., 2014:1021), found that AAI attachment classifications are mostly invariant amongst Western and non-Western cultures and gender.

However, attachment constructs have still been found to be affected by culturally specific influences, leaving room for adaptive behavioural responses to be expressed in culturally specific ways depending on the ethnic environment in which the individual was raised (Haltigan et al., 2014:1021). There is some evidence supporting the hypothesis that African Americans are more emotionally expressive than European Americans, which leads to the expectation that African Americans may show an elevation on the preoccupied (level of distraction) factor of the AAI due to their focus on their emotions (Haltigan et al., 2014:1021). Although the dismissing and preoccupied factors represent similar constructs across ethnicities, research has proven that there might still be mean level differences across cultures in certain factors of the AAI interview (Haltigan et al., 2014:1021).

In further studies, it was found that African Americans scored higher on the maternal anger indicator of the AAI (Haltigan et al., 2014:1030). This was presumed to occur as a result of the reported high levels of father absenteeism amongst African American families (Arnett, 2016:175; Haltigan et al., 2014:1030). It has been speculated that African American women have more intense, emotionally entangled relationships with other maternal caregiving figures than European women, due to multiple caregiving arrangements (Arnett, 2016:175; Haltigan et al., 2014:1030). Relational tensions between multiple caregivers, such as mother and grandmother, as well as the possibility of different mental representations, was also

thought to increase associations between maternal anger and preoccupation for African American women in the AAI (Haltigan et al., 2014:1030).

The AAI measure is costly in terms of duration when conducting interactive assessments and narrative interviews, and in terms of training to properly interpret data (Zeanah et al., 2011:825). It is, however, a valuable measurement when used alone or as part of an attachment-based intervention.

4.2.8 The Transition to Adulthood Attachment Interview

The Transition to Adulthood Attachment Interview (TAAI) aims at assessing the attachments of adolescents and young adults, and at identifying behaviours related to protecting the self from perceived dangers connected to the intimate relationships that stem from initial attachment experiences (Farnfield, et al., 2010:322). It is a modified version of the Adult Attachment Interview (AAI). The focus is on young adolescents to persons transitioning into adulthood; thus, focussing on the ages from 16 to 25 years.

The TAAI is implemented by means of an interview and is applied to identify and understand the feelings, thoughts and behaviour of adolescents or young adults in relation to their initial attachments. (Farnfield, et al., 2010:322). In addition, it is applied as a research tool by psychotherapists where new ways to conceptualise disturbed development are learned.

The TAAI can be applied in many contexts. However, it is costly and time-consuming for those who cannot afford to see a psychotherapist.

4.2.9 Questionnaires for measuring attachment

There are a number of questionnaires that have been developed with the aim of measuring attachment styles. The questionnaires are implemented by means of the caregiver and child filling in a questionnaire.

The Preoccupied and Avoidant Coping Questionnaire (PACQ) is used to measure either a child or adolescents' anxious or avoidant representations, and the Experiences in Close Relationships Questionnaire (ECR-RC) is the version for use by children (Brenning, Soenens & Braet, 2015:2). A separate questionnaire for measuring secure attachment is included in the PACQ, but not in the ECR-RC (Brenning et al.,2015:2). The assumption with this measurement instrument is that secure attachment results in low scores of anxiety and avoidance (Brenning et al., 2015:2). Children and adolescents who have scored higher on levels of anxiety and avoidance display more dysregulation of negative emotions (Brenning et al., 2015:2).

The Experiences in Close Relationships Questionnaire (ECR-RC) focuses on a factor analytic strategy (Lindberg, Fugett & Thomas, 2012:42). This questionnaire perceives the four attachment styles to be broken down into two personality constructs, namely avoidance and anxiety (Lindberg et al., 2012:42). This questionnaire is moderately successful in

predicting various clinical and attachment phenomena between the mother and infant with moderate correlation coefficients (Lindberg et al., 2012:42).

The Attachment and Clinical Issues Questionnaire was drawn up with the understanding that attachments can vary considerably between mothers, fathers and partners, and that it is limiting to think of there being only a single internal working model in an adult (Lindberg et al., 2012:42). Researchers reasoned that other emotions and social contexts to do with peers and religion can have an impact on the level of security of an individual (Lindberg et al., 2012:42). Such emotions have more of an effect than psychopathology in complicated relational dynamic systems. The items in this questionnaire have been developed based on natural observations of patients in hospitals and treatment centres.

Questionnaires to assess a child's perception of attachment were also developed, for example, the Security Scale and the Inventory of Parent and Peer Attachment (IPPA). A main focus of such attachment measures is to capture a child's internal representation of their main caregivers (Madigan et al., 2016:370).

The above-mentioned questionnaires are dependent on the respondents being literate, which is not always the case in a developing world context. They are also based on observations of patients in clinic type environments, not of those in natural environments. Again they have been developed for a Western context, not considering a variety of social contexts in the developing world.

4.2.10 The Attachment Projective System

The Attachment Projective System (APS) is a projective assessment method involving a free response task that aims at assessing individual's inner working models of attachment (Nygren, 2014:236). The Attachment Projective System is implemented by requesting the individual to form narrative stories in response to a standardised set of projective attachment stimuli presented as cards with line drawings that are designed to activate the individual's attachment system (Nygren, 2014:236). The first card is neutral, while the remaining cards show attachment scenes that portray major attachment experiences in one's life. In the first few cards, only one character is depicted and thus the individual must rely on the internal working model of the main attachment figure for a sense of inner security. The remaining cards show pictures with more than one single character (Nygren, 2014:236).

In total, 90 cards are sorted based on specific attachment-related behavioural characteristics, as mentioned above (Minde & Minde, 2006:547; Madigan et al., 2016:370). A secure attachment is determined by how the cards are sorted by trained observers or the parent, and therefore by their individual perceptions (Smeekens et al., 2009:369). The piles that the cards are sorted into are put in two from most descriptive to least descriptive. The emphasis in this test is on the exploratory and natural home setting, focusing on the child's

expectations under conditions of lower stress (Smeekens et al., 2009:369). The Attachment Projective System has led to the refining of attachment theory constructs and has been acknowledged as a promising method in neurobiology research. However, it needs to be further validated in various fields of application (Nygren, 2014:238).

Other semi-projective techniques such as story stem narratives are also applied to assess a child's internal representations of attachment (Madigan et al., 2016:370). The Attachment Story Completion Task and Anxiety Test aims at assessing the levels of stability and security with regards to past attachments and is applied to children and adolescents (Madigan et al., 2016:370).

4.2.11 INTAKT instrument for assessing mother-child interaction

Hirshmann et al. (2011:296) indicate that the quality of interactions between children and their primary caregivers plays a critical role in the optimal development of the child. The focus of this instrument is on maternal/caregiver behaviours, and of how the quality of these behaviours affect a child's cognitive, language, scholastic and social development, as well as the ability of the child to emotionally self-regulate, co-operate with parents and engage in reciprocal play activities (Hirshmann et al., 2011:296).

In the development of the INTAKT measurement instrument, the authors identified three key maternal/caregiver behaviours that were found to have beneficial influences on the development of children (Hirshmann et al., 2011:296). Firstly, they identified maternal/caregiver sensitivity as a critical behaviour in the development of a child. Maternal sensitivity has been found to be correlated with a child's later attachment security and the formation of a secure attachment relationship with the caregiver. In toddlers, maternal sensitivity predicts higher self-control, fewer problem behaviours and more compliance with caregivers and thus has a positive effect on child development (Hirshmann et al., 2011:296).

Furthermore, they emphasised the importance of two other behaviours, namely maternal/caregiver feedback and interactive style during episodes of joint attention (Hirshmann et al., 2011:296). The quality of feedback the caregiver offers has an affect on a child's persistence in the face of difficulty, sense of pride and shame with regards to succeeding and failing in tasks. The quality of the interaction between the caregiver and child by means of attention switching or attention following by the caregiver at the appropriate developmental stage of the child, directly affects the child's reactions and interactions and thus the child's social development and ability to self-regulate (Hirshmann et al., 2011:297-298).

This measurement instrument therefore aims to assess the quality of mother-child interactions, as well as lead to further interventions focused on enhancing the quality of such interactions leading to more secure attachments and better child development (Hirshmann et al., 2011:299). INTAKT has only been used with Austrian foster mothers and

their children, and would thus need to be used with different caregiver-child dyads, such as with fathers and day-care providers and with dyads from different cultural and racial origins to measure its' cross-cultural validity and reliability (Hirshmann et al., 2011:307).

4.2.12 Discussion of instruments measuring attachment

The instruments for measuring attachment that were described in this section indicate a variation in the specific focus of assessment. Some instruments, such as the SSP, focus on the assessment of the infant's attachment style (Berk, 2013:430). Other instruments focus on a wider scope of mother-infant behaviours and interactions that indicate positive attachment, e.g. the Q-sort, MIMS and the Infant CARE-Index (Cadman et al., 2018:2; Farnfield et al., 2010:318). INTAKT focuses on maternal sensitivity in attachment, but also other maternal behaviours which support child development (Hirshmann et al., 2011:296).

Assessment of attachment includes behavioural (e.g. by means of observation), representational, or questionnaire type measurements, determining the nature of the assessment and the setting in which it is conducted. Some of these measurements are conducted in laboratory or office situations, and others in naturalistic home environments. Mother-infant attachment mostly relies on observational measures and scoring, for which training is needed for the specific methods (Greenspan & Wieder, 2006:44). Adolescent and adult measures of attachment use questionnaires, interviews or projective instruments. Measures of attachment can therefore be distinguished for different stages of development and in terms of their focus and type of measurement.

It should be kept in mind that when measuring attachment in a multi-cultural context, a variance with regards to some Western indicators must be considered in non-Western contexts. In a meta-analysis on attachment and internalising behaviours, culture and ethnicity were found to have an impact on these aspects (Madigan et al., 2016:367). Culture and ethnicity are significant moderator factors affecting indicators of internalising and externalising child behaviours expressed in representational and questionnaire measures of attachment. Research has found that the association between secure attachment and child internalising and externalising behaviours was higher amongst Caucasians compared to Hispanic and Black samples (Madigan et al., 2016:386). Furthermore, higher rates of internalising behaviours have been found in minority groups (Madigan et al., 2016:386).

Therefore, cultural and ethnic differences must be considered with regards to variance on certain attachment measures. With reference to the South African multi-cultural context, a recent study by Dawson, Bain and Mesman (2017:7) advises that measures used to assess maternal sensitivity should be geared towards the specific context so as to ensure valid interpretation of the measures and to avoid pathologising local practices that do not comply with Western measures. As an example, they propose that coding maternal sensitivity by means of the Q-Sort test, the MBQS-mini, seem to be appropriate "in cultural contexts where verbal interaction and a focus on infant learning are culturally appropriate and

normative" (Dawson et al., 2017:7). Already in the 1990s, Tomlinson recommended that more naturalistic assessments and observations in South Africa should be synthesised with international measures of attachment such as the Strange Situation in order to heighten the cross-cultural validity of these measurements (Tomlinson, 1997:119).

One also needs to bear in mind that in communities rife with poverty as is the case in developing countries, the pressures on parents differ markedly from those facing parents in communities that are the main focus in child development research in the developed world (Tomlinson et al., 2005:1044). Research has demonstrated that there is a need for such attachment measures to be adapted to a South African context (Tomlinson et al., 2001:51).

4.3 INDICATORS OF ATTACHMENT USED IN ATTACHMENT-BASED MEASURES

Many instruments that measure attachment focus on measuring maternal behaviours, with most studies applying a Likert type scale, where maternal behaviours are often ranked from one (lowest) to five (highest) (Bernier et al., 2015:1856; Bojanewski & Ammen, 2011:2; Pallini & Laghi, 2012:163). Indicators in these instruments include: the mother's degree of sensitivity in responding to the infant's requests and degree of encouraging the infant positively in pursuing a task; the degree to which the mother allows the infant to make choices by providing possibilities and following her child's pace; the degree to which the mother allows her child to be empowered, only intervening when a task seems too difficult for the child; and the degree to which the mother is sensitive to the child's feelings and needs, still assisting her child to focus back on the task concerned (Bernier et al., 2015:1856).

A number of indicators commonly applied in attachment-based measures are described in the next section.

4.3.1 Maternal sensitivity

Since attachment theory focuses dominantly on maternal sensitivity as a construct leading to the development of a secure base, sensitivity is often a main category applied in the index of instruments that measure attachment (Hirschmann et al., 2011:296). Maternal sensitivity has mostly been assessed whilst analysing various mother-infant interactions during a play session (Bernier et al., 2014:1852). Numerous activities to measure sensitivity are used, such as free play with age-appropriate toys, tasks which involve some distance from the mother, a transition period between one activity and the next, a novel toy and face-to-face procedures (Farnfield et al., 2010:318; Haltigan et al., 2014:1024). Maternal sensitivity gauges the degree to which the mother is able to take turns in mutual interactions with her infant, and is aware of and able to manage emotional resonance with her infant's internal states, as well as translate her infant's feelings into words (Conzolino, 2010:181). This capacity eventually leads to the child's ability to associate feelings with words leading to language development and early emotional self-regulation in the child

(Conzolino, 2010:181). Maternal sensitivity leading to infant reaction is considered to be one of the most dominant indicators applied in attachment-based measures.

4.3.2 Parental feedback

Other scales have used the construct of parental feedback as another category in the index of measurement instruments of attachment (Hirschmann et al., 2011:296). Parental feedback is defined as the manner in which the infant is provided with information on whether her actions are appropriate, and includes the information provided on whether or not the infant's actions meet parental expectations (Hirschmann et al., 2011:297). Parental feedback has been divided into negative and positive feedback. Negative feedback is associated with parents with a history of maltreating their children. Positive feedback is when the parent is consistently responsive and proactive in fulfilling the infant's needs (Hirschmann et al., 2011:297).

Parental feedback occurs by means of verbal communication and body language (Stern, 2002:32). Research has found feedback to be significant as it leads to cognitive representation within the working memory of the infant (Jennings, 2011:21). When an infant watches certain actions in parental feedback, mirror neurons are fired leading to enhanced social functioning (Jennings, 2011:21). Over time, synaptic transmission in the brain becomes more intricate. Electrical and chemical messages received by the senses are changed into electrochemical impulses in the brain (Cozolino, 2010:179). As a result of mirroring, such signals lead to new behaviours which send messages back across the social synapse, the external medium between the infant and parent. A social synapse is defined as the medium through which humans are linked (Cozolino, 2010:179). Thus from birth, survival depends on connecting to others by means of the use of senses. Connecting and receiving nurturing feedback from an attachment figure whose brain is set up to accept the infant as an extension of herself, leads to bonding, attaching and surviving becoming a possibility (Cozolino, 2010:180).

It is well documented in research that communication with children has a powerful effect on how they develop (Siegel & Hatzell, 2003:3). The quality of parental feedback determines a child's security and, importantly, is based on a parent having integrated and worked through their own past in order to consolidate a child's feeling and needs and provide accurate effective feedback (Siegel & Hatzell, 2003:3). Parental feedback is therefore an important indicator to be applied in the measurement of attachment.

4.3.3 Joint attention

Most measures of attachment that focus on infants, toddlers and younger children, refer to the link between attachment and attention. Secure attachment behaviours have been found to be linked to the flexibility of attention (Pallini & Laghi, 2012:159).

There are four prominent factors relating to attention that often appear as indicators in Western measurement instruments, namely attention flexibility, attention lability, attention detachment, and attention disorientation (Pallini & Laghi, 2012:163-164). Children who are able to engage in joint attention with their parents for longer periods, while at the same time shifting their focus of attention from one stimulus to another, are believed to have a higher degree of attention flexibility. Children who do not focus much on joint attention with their parents and seem to be disconnected and not 'awake', are believed to be detached. Attention disorientation is believed to occur when children are unable to organise their attention in the present environment to engage and select stimuli amongst the many distractions in the environment (Pallini & Laghi, 2012:164). Attention lability is understood as the inability to maintain attention on an object, to maintain attention levels, and to ignore distracting stimuli (Pallini & Laghi, 2012:161).

Joint attention often occurs during play in infancy where the mother will look at and speak to her infant simultaneously, and during feedback when the mother gazes at her infant (Stern, 2002:34). Joint attention is defined as the ability of an infant to co-ordinate her attention with another person and another object or event, and therefore involves the triadic coordination of attention between the caregiver, object and herself (Hirschmann et al., 2011:298; Pallini & Laghi, 2012:158). Dyadic joint attention, thus between the mother and infant, has been assessed in terms of attention switching, which is engaged more by caregivers with infants younger than six months, and has been found as an appropriate assessment of attention since these infants are more passive and less active, unable to hold attention for longer periods.

Generally, attention security to a caregiver is predicted by means of measuring and analysing attention flexibility and negative emotions (Pallini & Laghi, 2012:160). The attention of a securely attached child would be flexible, where a child is able to move her attention from the caregivers to the environment. An avoidant child is most specifically focused on play or the environment, no matter whether the mother is physically present or absent (Pallini & Laghi, 2012:160). A resistant-ambivalent child focuses her attention only on the caregivers, completely neglecting the environment, while a disorganised child is unable to focus proper attention on the mother or on the environment (Pallini & Laghi, 2012:160).

In research, it has been found that there is a close connection between attention and social competence in children later on in life (Pallini & Laghi, 2012:159). Children who were engaged with for longer periods of time have been found to be more effective in their attention flexibility, as they can more easily actively divert their attention from one object to another (Pallini & Laghi, 2012:159). Therefore, for children over six months it becomes less effective for caregivers to switch attention, but better to rather follow the attention of the child (Hirschmann et al., 2011:298).

4.3.4 Reunion behaviour

In the SSP the interactive rating scales apply the indicators of proximity seeking, contact making, avoidance and resistance (Farnfield et al., 2010:319). Separation from the caregiver activates the attachment system of the infant, prompting the infant to seek proximity to and assurance by the mother (Holmes & Slade, 2018:17; Kennedy et al., 2014:288). Separation and reunion of both the attachment figure and infant are dominant indicators applied in the SSP (Bernier et al., 2014:1852). Separation and reunion are described as the degree to which the mother reaches out to or welcomes her child when she perceives her child to be in physical or psychological distress, and the degree to which the infant seeks the mother's comfort when anxious and in need.

4.3.5 Discussion of indicators applied to measures of attachment

When understanding indicators applied to measures of attachment, there are a number of factors about which to be sensitive when working in different social contexts. Research has found emotional expression to vary in different contexts. Studies indicate that African Americans tend to be more emotionally expressive and less inhibited in their expression of feelings, which could affect the interpretation of indicators in the measurement of attachment (Haltigan et al., 2014:1030). African cultural heritage values emotional expression; discouraging emotional inhibition (Haltigan et al., 2014:1030). Studies have found that expressions of emotion might differ as a result of the various promoting and inhibiting environments to which caregivers and children are exposed (Garcia Coll & Magnuson, 2000:99). In this regard, processes such as the number of important primary caregivers and the expression of emotion and cognitive skills might differ in various contexts). Haltigan et al. (2014:1021) therefore recommends that further research needs to be conducted across ethnic groups to confirm the empirical meaning and the developmental importance of the preoccupied and dismissive caregiver factors in order to ascertain whether there are any ethnic differences in this regard.

Several researchers have pointed out the need for further research on assessing the construct validity of more verbally dependent attachment indicators in relation to maternal sensitivity and observed child attachment behaviours in racially diverse subject groups (Garcia Coll & Magnuson, 2000:98-100; Madigan et al., 2016:387). In the literature, there is much discussion of attachment as a universal cross-cultural construct where maternal sensitivity and infant security indicators have proven to be robust across cultures (Bain, 2014:593; Haltigan et al., 2014:1020; Keller, 2015:176; Madigan et al., 2016:3860). More attention should, however, be placed on indicators that allow for variation with regards to the effects of culture and social factors in naturalistic type settings (Tomlinson et al., 1997:119).

In the following section, attachment-based interventions are discussed in greater depth with respect to prevention and early intervention programmes. The discussion also focuses on aspects such as the length, focus and methods of instruction used in different programmes.

4.4 ATTACHMENT-BASED PROGRAMMES WITH INFANTS AND CHILDREN

A parenting programme is defined as an educational programme focusing on teaching parents' strategies that facilitate their individual behaviour and lead them to avoid evidence-based risk factors associated with the occurrence of disorders in children (Delawarde et al., 2014:170). Parenting programmes offer services in terms of prevention or early intervention. Some attachment interventions combine these two approaches, other programmes focus more on social support (Mercer, 2015:382).

Early intervention parenting programmes focus on reframing parents' inner representations (inner working models) of their past attachments (Lee et al., 2013:266). These programmes offer formal and informal support and facilitate parental development in becoming effective parents (Baker, 2014:71; Berlin et al., 2013:83; Kalinauskiene et al., 2009:614). It has been found that early intervention programmes are moderately effective in increasing a child's level of security, but more effective in increasing parental sensitivity in both clinical and non-clinical groups, and in multi-problem families (Kalinauskiene et al., 2009:614).

Preventative attachment programmes focus on facilitating parents becoming more sensitive and attuned to infant signals and cues (Miller & Commons, 2010:1). These programmes focus on high risk parent-child dyads before severe breaks in attachment have occurred, and apply the logic of efficacy and efficiency while relying on validated and scientific data to ensure the feasibility of the programme (Delawarde et al., 2014:170).

Attachment-based programmes vary in length or duration. This aspect is discussed in the next section.

4.4.1 The length of attachment programmes

Research indicates that varying lengths of programmes are effective for a variety of population groups. For multi-risk families more intensive longer term interventions involving the understanding of internal working models and parenting behaviours have been found to be more effective (Berlin et al., 2008:748; Kalinauskiene et al., 2009:614). Alternatively, shorter interventions have been found to also be effective, especially with regards to improving maternal sensitivity and infant attachment insecurity (Berlin et al., 2008:748; Velderman et al., 2006:267).

Many international attachment programmes are intensive one-year programmes such as Child Parent Psychotherapy (CPP), the UCLA Family Development Project, and Minding The Baby (MTB) (Berlin et al., 2008:748). Others are 10 to 20-week programmes such as the Circle of Security (COP), with each session approximately 90 minutes long, as well as the

Attachment and Biobehavioural Catch-Up (ABC) also being ten to twenty weeks in length (Mercer, 2015:382; Ramsauer, Lotzin, Muhlhan, Romer, Nolte & Fonagy; 2014:8; Zeanah et al., 2011:820). Finally, there are shorter three-to-four session programmes (Berlin et al., 2008:748).

Studies have found that the most effective interventions enhancing sensitive parenting and infant attachment security had a more limited number of sessions (six to eight sessions) with a specific behavioural focus commencing no sooner than six months after the birth of the baby (Van Ijzendoorn, 2007:3).

Existing attachment programmes differ in the focus and scope of intervention, as discussed in the next section. These variations are discussed in the following section.

4.4.2 The focus of attachment programmes

Attachment programmes should have clearly defined goals and criteria for success with regards to more or less intensive services, with either a general focus on support and working models, or a more specific focus on sensitive parenting and child characteristics (Berlin et al., 2008:748).

Past attachments of parents affecting current parenting behaviours, is often a focus in attachment-based programmes.

4.4.2.1 Parental internal working models

The transmission model applied in attachment-based programmes, as put together by Van Ijzendoorn, is underpinned by the understanding that a parent's internal working models as a consequence of past attachments, shape parenting behaviours by strongly influencing how the parent interprets the child's behaviour and understands the child's needs (Berlin et al., 2008:745). It is specifically the degree of sensitivity a parent shows towards a child's needs that determines the emotional security of a child (Berlin et al., 2008:746). Research has been focusing on closing the transmission gap by changing negative parental mental representations of attachment to more positive ones (Velderman et al., 2006:267). This goal is facilitated by expanding on adult internal working models in parenting programmes to include reflective functioning and insightfulness, in that intervention and prevention programmes also focus on what parents think about their children's behaviour and emotions (Berlin et al., 2008:746; Lee et al., 2013:266). Reflective functioning, an important concept incorporated in attachment-based programmes, refers to the parent's ability to reflect on her own and her child's internal mental experience (Berlin et al., 2008:746; Bain, 2014:582).

According to Bowlby, prevention and early intervention attachment-based programmes should focus on two primary intervention targets, namely parents' internal working models and parents' behaviours (Berlin et al., 2008:746). Since the internal working models of the

parent affect parents' behaviours and thus a child's internal representations, the focus for intervention programmes is often the parent's internal working models (Lee et al., 2013:266). The mother is assisted in gaining more insight into her working models of self and others, most especially in difficult situations, and in understanding how these affect her interactions with her child (Velderman et al., 2006:266). A third important target is the intervention process which refers to the connection formed between the parent and programme presenter, and is the main determinant of true change. A secure relationship with the programme facilitators should encourage the parent to explore her past, herself and her relationship with her child (Berlin et al., 2008:748). Bowlby believed that new attachments between the parent and significant others are one of the most likely factors to alter parental internal working models (Berlin et al., 2008:748).

The programmes that focused on reframing parents' internal working models (cognitive representations) have shown positive results but have not been successful in finding significant differences between treatment and control groups with regards to attachment classifications of the infant (Egeland, 2009:4). Some programmes focus on an infant-parent psychotherapy approach, where the programme facilitators attempt to clarify the mother's affective experiences of caregiving and her feelings towards her child (Velderman et al., 2006:266). Other such attachment-based behavioural cognitive programmes focus on the reinterpretation of childhood events and to subsequent changing maladaptive emotions and behaviours (Gyungjoo, McCreary, Breitmayer, Kim & Yang, 2013:266). The focus of these programmes is often on increasing the mother's awareness of how her own historical attachments affects her relationship with her infant (Gyungjoo et al., 2013:266). In such programmes, mothers are taught various strategies for sharing positive emotions with their infants and developing a bond that consists of mutual trust (Gyungjoo et al., 2013:266). As a consequence, significant differences have been found between treatment and control groups in maternal empathy, goal-corrected behaviour with one's partner, child avoidance, and anger in the mother (Egeland, 2009:4).

4.4.2.2 Parental behaviours

Attachment parenting focuses on parental behaviours that reduce the infant's stress levels and anxiety and enhance brain development such as co-sleeping (during infancy), breastfeeding on demand, holding, touching and parental responsiveness to crying (Miller & Commons, 2010:1-4). The psychological benefits of positive parental behaviours are deemed to be more effective emotional co-regulation between infant and parent, and more functional secure attachment relationships of infants to parents and significant others. Developmental changes in the child also lead to changes in attachment parenting practices over time, which reduce emotions of fear, anxiety and anger (Miller & Commons, 2010:1).

Another new area of research pertaining to prevention and early intervention in attachment-based programmes, is the attempt to understand insensitive parental behaviours such as withdrawal, disorientation, role confusion, negative intrusiveness and

negative cues, rather than the absence of parental sensitivity (Berlin et al., 2008:746; Kalinauskiene et al., 2009:614). These negative parental behaviours are thought to stem from insecure internal representations of the mother and difficulties in coping with her own stress in the face of her infant's needs and demands, and are focused on within the context of an attachment-based programme (Bakermans-Kranenburg et al., 2009:614; Berlin et al., 2008:746). The mother's experience of childhood maltreatment is associated with offspring experiences of maltreatment and predicts the victimisation of offspring as a consequence of the mother's mental health problems, social isolation and social information processing patterns (Berlin, Appelyard & Dodge, 2011:162). Therefore, prevention of maltreatment is an important aim of attachment-based intervention programmes with infants and children. This goal is accomplished by assisting parents in attachment programmes to understand their sensitive or insensitive behaviours towards their children on a deeper level and supporting parents to feel less isolated.

Therefore, the focus of most early intervention programmes is to heighten maternal sensitivity and prevent child maltreatment in order to improve future child outcomes (Moss, Lecompte, Pascuzzo, Dubois-Comtois, Cyr, Tarabulsy, St-Laurent & Bernier, 2012:5). Programmes focus on the mother's history of childhood abuse and are mostly home visit programmes (Berlin et al., 2011:172). The importance of having skilled facilitators who are aware of abuse history of caregivers is essential in such programmes (Berlin et al., 2011:172). Such interventions aim at reducing the social isolation these mothers or caregivers experience and, therefore, breaking the cycle of abuse (Berlin et al., 2011:172). Early intervention programmes are focused more towards increasing predictability, coherence and warmth of parental behaviour towards the child, most particularly in high risk populations (Moss, et al., 2012:7). Interventions focus on the parent-child dyad, although research has confirmed that there are insufficient programmes focusing primarily on the dyad where a child's developmental timeline is respected (Moss et al., 2012:7). Theraplay is a model for treatment facilitating sensitive, responsive parental behaviours for high-risk families through interaction and play (Booth & Jernberg, 2010:4). In the Theraplay programme, parents are encouraged to gain empathy and understanding of their child by means of reflection on the past which may interrupt parents from responding sensitively to infant cues.

Other programmes involve supporting mothers who are struggling with post-partum depression in home-based programmes (Rossiter, Fowler, McMahon & Kowalenko, 2012:90). These programmes focus on mothers who experience difficulty, distress or depression in the early months after childbirth and aim to increase their self-confidence and their belief in their own parenting skills, as well as to enhance their bonds with their infants (Rossiter et al., 2012:90). In Australia, for example, home-based programmes have become established as opposed to centre-based care (Rossiter et al., 2012:90). In the last 20 years, such programmes have gained much recognition as being effective in assisting families with

young children. The focus in these programmes is more intensive and pragmatic in assisting families with multiple and complex vulnerabilities.

Many programmes therefore focus on a range of parental behaviours which demonstrate that the quality of parental feedback and joint attention, as discussed by Hirshmann et al. (2011:297), alongside maternal sensitivity affect the formation of a secure attachment with the child. These behaviours should be considered in attachment-based parenting programmes. Understanding child characteristics is also an important focus to be discussed in the following section.

4.4.2.3 Child characteristics

A child-centred parenting programme focuses on parents learning to be sensitive in responding to the cues an infant gives to the parent, and is a common approach in attachment programmes (Kalinauskiene et al., 2009:614; Miller & Commons, 2010:1). Parents are taught to provide distress relief to the child in infancy and beyond with a warm, sensitive level of interaction, which reinforces the infant's contact seeking with the parents and a sensitive reciprocity between the parent and infant which promotes secure development (Kalinauskiene et al., 2009:614; Miller & Commons, 2010:10).

Another area of research worthy of consideration when focusing on attachment programmes, is gene-environment research which has found that children respond to parental sensitivity differently based on genetically based differential susceptibility (Arnett, 2016:167-168; Berlin et al., 2008:746). Therefore, the transmission model and its implications for programmes may not be relevant to all children and should be considered when designing an early intervention programme. A blend of nature and nurture impacting child development should be considered, as each child has a unique temperament (Arnett, 2016:167).

Alongside attachment-based parenting programmes, Western parenting programmes in general have been found to be most effective as an intervention when they focus on older children with behavioural problems (George, Kolodziej, Rendall & Coiffait, 2014:18). Research has shown such interventions to be effective when both the children and the parents are involved by reducing child behavioural problems, and also by reducing parental stress and increasing parental levels of confidence (George et al., 2014:18). In South Africa, programmes run in homeless shelters with children who have developmental problems have proven to be successful (Bain, 2014:591).

4.4.3 Educational programmes

Over the past 20 years, many programmes based on attachment theory and on research in this area have been focused on facilitating attachment security through psycho-education (Berlin et al., 2008:745). Public health and criminal justice programmes have begun to

include attachment assessments and attachment-focused treatments in their services (Berlin et al., 2008:745; Berlin et al., 2013:83).

Some attachment-based interventions use methodologies involving a narrative, qualitative, educational method where parents are asked to reflect on their parental behaviour and respond to open-ended questionnaires and discussions (Gray, 2015:311). Reflective functioning and skills in regulating emotions are the focus of these interventions (Gray, 2015:311). Such methods of instruction have been applied to different early intervention programmes in South Africa (Aspoas & Amod, 2014:586).

The Circle of Security attachment-based intervention programme is an educational programme that encompasses several differences which make this programme unique (Marvin, Cooper, Hoffman & Powell, 2002:107). This programme consists of attachment-focused pre- and post-intervention assessments, and the intervention itself focuses on attachment theory and procedures, as well as on attachment research and object relations theory (Zeanah et al.,2011:820). The Circle of Security programme is a psychodynamically focused and psychotherapeutic parenting programme. It is considered to be empirically proven as valid and reliable in the United States (Ramsauer et al., 2014:7). The Circle of Security programme focuses on allowing individual, flexible and intense therapeutic interventions to each mother-infant dyad involved, and is thus considered effective at detecting and treating early attachment problems obstructing the development of a secure base within the infant (Ramsauer et al., 2014:5).

A Circle of Security manual is provided to each participant. It focuses on learning about attachment, exploration, communication and affective experiences between the mother and child, and assists the mother in understanding her strengths and struggles in order to create security for her child. The Circle of Security programme can be implemented in a number of different settings, such as the outpatient unit of a university medical centre or in a community-based environment (Ramsauer et al., 2014:5).

4.4.4 Community-based programmes

There is much debate as to how evidence-based research can be adapted to community-based intervention programmes in the West to make such programmes more effective in this setting (Bohr, Halpert, Chan, Lishak & Brightling, 2010:55). Evidence-based interventions are therefore often adapted to cope with the shortcomings of the community setting in order to meet the needs of the community members who are under-resourced (Bohr et al., 2010:56; Wessels, 2012:120-121). Attachment-based community intervention programmes are based on fostering maternal sensitivity and infant security (Bohr et al., 2010:56). Community-based interventions lead to parenting stress decreasing, an increase in the self-esteem of the parents, and improvement in the cognitive understanding of parents, resulting in more positive parenting (Bohr et al., 2010:55; Wessels, 2012:120). Such

interventions with high-risk families that focus on sensitivity are likely to be successful when parents are interested in learning new ways of dealing with their infants (Egeland, 2009:4).

In the next section, the researcher aims to describe the various local and international methods of instruction applied when facilitating attachment-based programmes.

4.4.5 Method of instruction of attachment-based programmes

There are numerous methods of instruction employed to facilitate attachment-based programmes. The distinct methods of communication and transferring of knowledge, as well as the combination of these methods, are utilised in various different contexts.

4.4.5.1 Bi-directional method of instruction

In South African parent-infant intervention programmes, Western psychoanalytic knowledge and African indigenous knowledge are blended, with a movement away from one-directional communication (Aspoas & Amod, 2014:583; Bain, 2014:594; Wessels, 2012:121). The method of instruction for South African interventions therefore relies less on knowledge being imparted directly to the less knowledgeable in a one-dimensional style (Aspoas & Amod, 2014:583). A bi-directional method of instruction between facilitator and programme participants is regarded as more suitable for the South African context. Bi-directional communication is encouraged and implies a reciprocal exchange of information. A reciprocal exchange of information is important because there is a belief in the "*Ubuntu*" spirit defined as "*a person is a person because of another person*" which contrasts with the Western independent model of self (Aspoas & Amod, 2014:583).

4.4.5.2 Video feedback method of instruction

Western attachment-based intervention programmes often involve the video feedback intervention method that promotes positive parenting with a sensitive approach (Alink et al., 2006:997; Cassiba et al., 2015:53). Video feedback encourages caregivers to reflect on their own and their child's behaviour, and to look at their past attachments and the impact these have had on their caregiving patterns (Lee et al., 2013:266; Marvin et al., 2002:109). This intervention method involves mirroring by means of video feedback and discussing actual parent-child interactions, and has proven to be effective in enhancing maternal attitudes toward sensitivity and in promoting sensitive discipline interactions between the parent and infant (Van Ijzendoorn, 2007:2). In a programme conducted by Kalinauskiene et al. (2009:615), the intervention commenced seven months after birth where 54 mother-infant dyads were asked to participate and were evaluated for their sensitive responsiveness on the basis of six-month video-recorded play interactions. Other studies followed through by Van Zeijl and colleagues, used a video feedback method of instruction with parents of a group of 1-to-3-year-old children with high levels of externalising behaviour, and resulted in a decrease in overactive, oppositional and aggressive behaviour compared to the control group (Egeland, 2009:3).

Some interventions focus on enhancing maternal sensitivity with video feedback on the mother's own sensitive or insensitive behaviours (Velderman et al., 2006:267). Others focus on enhancing sensitivity by restructuring the mother's negative attachment representations from the past to more positive representations (Lee et al.,2013:265-266; Velderman et al., 2006:267).

4.4.5.3 Verbal method of instruction plus video analysis

Programmes involving a verbal method of instruction often include video analysis of pre-recorded examples of interactions of mother-infant dyads. These videos are used as examples for parents to watch, learn from, and discuss within the context of the group. The Circle of Security programme is an example of this method of instruction and involves a psychodynamic approach where the programme is presented in a group context which incorporates video-analysis of mother-infant interactions, whilst encouraging reflection and discussion of these videos within the group (Ramsauer et al., 2014:8). This intervention uses edited videos of mother-child interactions, teaching caregivers through reflection and discussion about sensitivity to their infant's emotional signals (Gray, 2015:311). Other studies involving a verbal method of instruction including video analysis have been carried out in Western contexts and found an increase in the maternal sensitivity of the insecure mothers who participated in the intervention (Cassiba et al., 2015:59). Children of these mothers were also found to gain from the intervention as they were assessed as more secure than the children of insecure mothers in the comparison group.

4.4.5.4 Home-based versus centre-based method of instruction

The home-based method of instruction is conducted in the home of the mother-infant dyad. Home-based studies have been facilitated in the Netherlands where mothers of irritable infants were randomly assigned to either a treatment or a control group (Egeland, 2009:3). Such programmes focused on enhancing parental sensitivity. Findings have demonstrated that home-based programmes lead to more sensitive and more securely attached mother-infant dyads (Bernier et al., 2014:1852; Egeland, 2009:3).

Further studies have been conducted by Rossiter et al. (2012:90) where home-based interventions were performed which involved 111 mothers who experienced distress after childbirth in the first year (Rossiter et al., 2012:90). The intervention was supportive and therapeutic for mothers who were diagnosed with depression. This particular study found that women who are insecure about their own childhood and past attachments have a higher likelihood of developing post-natal depression and require immediate care in the home (Rossiter et al., 2012:91).

Such home-based programmes involve about four to ten home visits with mothers and their infants of six to seven months of age or younger (Rossiter et al., 2012:90). A short video recording of interaction of the mother and infant is made and then viewed by the nurse and

mother, who examine the experience together. Through this joint viewing, a process of reflection occurs about the interaction. The nurse draws the mother's attention to her and her infant's strengths, as well as her infant's cues and attempts at communication (Rossiter et al., 2012:90). The nurse then discusses with the mother how to enhance mother-infant interactions and assists the mother in developing internal and external resources to meet future parenting challenges (Rossiter et al., 2012:90). The nurse provides supportive counselling, identifying community support, problem solving, monitoring mood and anxiety, and utilises psycho-education methods to develop the parent's knowledge and skills on infant development (Rossiter et al., 2012:90). Home-based interventions have been found to be beneficial in terms of the warmth, understanding and professional knowledge and approach of the home visitors, the heightened self-esteem of the mothers, the improved sensitivity and responsiveness of mothers to their infants, as well as the support and consistency of the programme itself (Rossiter et al., 2012:90). These facts demonstrate how home-based interventions can be valuable in enhancing mother-infant attachment.

The UCLA Family Development Project included 64 at-risk pregnant women and their first-born infant babies in a home-based environment (Berlin et al., 2008:750). The method involved weekly home-visits which were conducted by a facilitator from the second trimester of pregnancy through the infant's first year of life, with bi-weekly home visits in the second year (Berlin et al., 2008:750). Mother-infant therapy groups were run on a weekly basis from three to 15 months after the birth of the baby. The therapeutic focus was on the relationship between the mother and facilitator, the mother and her family of origin, and the mother and child (Berlin et al., 2008:750). Results showed that infants in the programme were more likely to be securely attached than infants in the control group. It was also found that the toddlers in the programme were more compliant, and the mothers less punitive and more encouraging in terms of developing independence in their infants (Berlin et al., 2008:750).

The Minding the Baby programme is another example of a weekly home visit where the facilitator aims to serve as a secure base for the parent (Berlin et al., 2008:751). This intervention makes use of a manual and focuses on teaching parental behaviours and internal working models, with a special focus on encouraging reflective functioning (Berlin et al., 2008:751).

Community-based intervention methods have also been widely implemented in the developed world, as indicated in the examples.

4.4.5.5 Community-based educational method of instruction

Attachment-based interventions are in some instances implemented at community centres, involving mother-infant dyads in low-income families (Gyungjoo et al., 2013:266). Interventions of this type, such as the one carried out in Korea by Gyungjoo et al. (2013:266), often follow a cognitive-behavioural approach and involve counselling,

education and play as methods of instruction. Mother-infant interactions are measured using separate observational measures of the mother and infant's behaviours during an episode of play (Gyungjoo et al., 2013:268).

Community-based interventions for older at-risk children in middle childhood and early adolescence in holiday camp environments have been implemented (Purvis et al., 2013:166). Each child is assigned a buddy and a college student who assists the camper throughout the day. Particular questions are asked as parents bring their children and hand them over to the caregiver for the day (Purvis et al., 2013:167). To alleviate anxiety, children are informed of the sequence of events for the day and activities are kept consistent. A variety of activities are practiced such as art activities, music groups, therapeutic games, dyadic games, puzzles, journaling, therapeutic swimming and horsemanship (Purvis et al., 2013:167). Closure groups are facilitated at the end of each day. The results of such community intervention methods often show the children to express more emotion both physically and verbally, as well as an increase in proximity seeking, spontaneous affection, improved eye contact, and spontaneous attachment behaviours. Such camp intervention methods are often run for vulnerable children having endured intense developmental traumas in their past. Community-based interventions of this kind aim to provide more 'corrective' relational and attachment experiences (Purvis et al., 2013:168).

In the following section, the researcher turns attention toward attachment-based programmes in South Africa.

4.5 ATTACHMENT-BASED PROGRAMMES IN SOUTH AFRICA

As described above, numerous Western methods of instruction are applied in attachment-based educational programmes. Much can be drawn from these empirically validated methods of instruction and adapted to a South African context. Currently in South Africa, parent-infant programmes are home-based or community-based, for instance in shelters for homeless women and children, and aim to support this high-risk group in a natural setting (Aspoas & Amod, 2014:584; Bain, 2014:594; Wessels, 2012:35,121). Such programmes are narrative-based and facilitated by psychodynamic therapists (Bain, 2014:594). A smaller number of programmes are implemented by private practitioners in a private practice setting or clinic environment (Baker, 2014:1). Private programmes seem to focus more on an Imago therapeutic approach with the parent than on interactional work with the infant or child (Baker, 2014:1). A description of a number of these programmes follows in the next section.

4.5.1 Community-based programmes

In South Africa there have been few parenting programmes with a focus on attachment (Cooper et al., 2009:1). High-risk families require interventions that are adapted to the multi-cultural context of South Africa, as well as the socio-economic problems in which

many families live. These programmes should ideally be run in naturalistic, community-based settings (Aspoas & Amod, 2014:580). In South Afirca, programmes in shelters have been found to be effective when working with homeless mothers at high risk (Bain, 2014:591).

The Mamma Zamma programme developed by Child Welfare Tshwane and the Draw the Line Child Support Centre has a number of differences compared to other programmes (Boonzaaier, Botes, Dhlamini, Dippenaar, Heck & Maribe, 2010:5). The goal of the Mamma Zamma programme is not only to focus on the attachment between the parent and child, but also to provide general enrichment groups in under-resourced communities (Boonzaaier et al., 2010:3). This programme does not particularly apply therapeutic interventions but focuses on simple activities using different tools such as numeracy, colours and concepts where basic information on attachment, abuse, routine, discipline and child safety is provided to enhance the general relationship between the parent and child. The Mamma Zamma programme has been developed specifically for mothers and carers of children between the ages of three to six years (Boonzaaier et al., 2010:52).

The Baby Mat project forms part of a wider initiative in South Africa to provide community-based psychosocial care for caregivers and their infants, which is regarded as appropriate to the socio-economic circumstances in South Africa (Aspoas & Amod, 2014:582; Bain, 2014:593; Hardudh-Dass, 2011:21). Ububele (a non-governmental organisation focusing on mother-infant health) manages the Baby Mat project. The project is based on the outreach community work carried out by the Anna Freud Centre at the Lane Hospital in the United Kingdom (Aspoas & Amod, 2014:582). The basic concept of the project is that mats, toys and chairs are provided for babies and caregivers to use while waiting for other services at their local health clinics. A professional team member is available to sit on the mat with the caregivers and infants and to provide support and make referrals if required to relevant services in community (Aspoas & Amod, 2014:582). The Baby Mat project is not specifically psychoanalytic in approach, but rather applies certain psychoanalytic principles, namely attachment theory, mentalisation, and intersubjectivity. Rather, caregivers are encouraged to think about the problems they have with their infants, in a session facilitated by the professional present (Aspoas & Amod, 2014:582).

The New Beginnings parent-infant intervention is an institution-based programme run at two shelters for homeless women and children in Johannesburg, and is a 12 week group psychotherapeutic intervention (Bain, 2014:594; Hardudh-Dass, 2011:25-26). This programme is experience-based and focuses on bridging the transmission gap between the mother's past childhood experiences and her current parenting (Hardudh-Dass, 2011:26). This programme is aimed at working with infants younger than 18 months of age, and is designed to improve the mother's ability to be attuned to the infant's needs and to increase her ability to acknowledge the separateness of the infant, while increasing her range of sensitive responses to her infant (Bain, 2014:594). The infants are involved in the

programme as active participants. Each session focuses on a particular theme beginning with pregnancy and birth, through to separations and reunions and how these are managed (Bain, 2014:594). The sessions are facilitated by psychodynamic psychotherapists with between seven and 20 years of clinical experience. This intervention shows an increase in the mother's structuring abilities and capacity to consider the infant's needs, and an increase in the infant's speech; suggesting that group intervention can be beneficial and lead to heightened maternal sensitivity in a South African context (Bain, 2014:601).

In terms of the nature and duration of interventions, Cooper et al. (2009:2) found that high-risk families in South Africa require a focus on more intense, comprehensive and long-term community interventions.

4.5.2 Home visit programmes

Non-profit organisations such as Ububele, aim to provide home visits and psychotherapy to mothers and infants as far as possible (Aspoas & Amod, 2014:582). The Baby Mat project described above is presented at home visits as well as in institutions (Aspoas & Amod, 2014:582). The Thula Sana parenting programme is another home-visit intervention in South Africa that is intended to promote a mother's sensitive, responsive engagement and interactions with her infant (Jama Shai & Sikweyiya, 2015:3). The programme targets mothers of infants who are zero to two years of age, from pregnancy onwards in under-resourced environments and involves sixteen home visits. Research on this programme demonstrated that mothers in the intervention group are more sensitive and less intrusive, and that there is a higher rate of secure infant attachment at 18 months compared to the control group (Jama Shai & Sikweyiya, 2015:4).

4.5.3 Concluding discussion

In conclusion, mother-infant attachment-based programmes focus mainly on caregiver behaviours to enhance attachment (Berlin et al., 2013:81; Lee et al., 2013:265). Behaviours such as sensitive care and insight into the caregiver's own feelings are discussed, and reflection is encouraged with regards to mental states of the caregiver. Examples of the focus of programmes include understanding past attachments in the Circle of Security programme and mentalisation in the Baby Mat programme (Aspoas & Amod, 2014:581; Marvin et al., 2002:112). Other attachment-based programmes focus on behaviour during mother-infant interaction (intersubjectivity), such as in Theraplay, for example play, eye contact, and mother-infant communication (Booth & Lindaman, 2010:48).

Currently, there is limited information and research on attachment-based parenting programmes and measures of assessment in South Africa (Bain, 2014:594; Baker, 2014:1; Minde et al., 2006:556). This finding stresses the importance of programmes and measures that are well suited for the South African context in order to avoid pathologising non-Western cultural practices and to ensure the validity of research results (Dawson et al.,

2018:7). The relevance of all observation-based measures when carrying out parenting research in non-Western contexts must be considered (Dawson et al., 2018:7). Further research on such programmes in a South African context is necessary, as has been demonstrated in other locally conducted studies (Aspoas & Amod, 2014:580; Cooper et al., 2009:2; Tomlinson, 2001:51).

Tomlinson et al. (2005:1044) explored attachment behaviours in the South African context with a focus on how socio-economic factors affect attachment. However, in this study the focus is on socio-cultural factors that might have an influence on mother-infant attachment. The information in this chapter and in chapter three suggests that socio-cultural contexts have an impact on caregiver-infant behaviours and thus also on the measurement of attachment. Therefore, one can conclude that a universal understanding of attachment should be combined with cultural sensitivity when developing measurement instruments and programmes, and when assessing mother-infant behaviours in a South African context.

4.6 SUMMARY

In Chapter 4, various Western measurement instruments of attachment of mothers and infants have been discussed in terms of their focus, aims and implementation methods. Some indicators of attachment used within these measures have been compared in terms of their applicability in a multi-cultural context, as in South Africa. The main indicators, namely reunion behaviour, maternal sensitivity, parental feedback, and joint attention were discussed. Some indicators were found to be variable while others were not, these were noted and discussed.

A number of different Western home-based as well as clinic-based attachment programmes were described in terms of length and focus, and method of instruction. The discussion shows that a vast array of methods and fields of focus have been applied to evidence-based early attachment programmes implemented in the Western context. Certain focus areas and methods of instruction are similar to these attachment programmes in South Africa, as described in the chapter.

Much can be learned from Western approaches and methods when designing early intervention attachment-based parenting programmes. It is, however, essential to remain mindful of the South African multi-cultural context and to consider the cultural values and norms of the main cultures represented in the country. Therefore, bearing in mind the information gathered in this chapter, and the literature knowledge discussed in Chapter 3, the researcher explored perceptions of attachment with a focus on the socio-cultural context of South Africa. This information was collated to inform the development of an attachment-based parenting programme and measurement instrument for caregiver behaviours that are supportive of the formation of a secure attachment style and healthy development of an infant in South Africa.

In Chapter 5, the researcher presents a detailed discussion of the research methodology applied in this study.

CHAPTER 5

QUALITATIVE AND QUANTITATIVE METHODOLOGY

5.1 INTRODUCTION

In this chapter the research methodology applied to this study is presented. The core concepts in this study, i.e. mother-infant attachment, attachment behaviours, primary and secondary attachments, parenting programmes, and contextual influences on these aspects, provide a context for considering the research methodology applicable to this study. The researcher aimed to explore the possible influence of socio-cultural factors on mother-infant attachment and to inform practice related to attachment-based interventions within the South African context. The steps according to which the research was conducted in terms of methodology and the different processes followed, are discussed.

5.2 GOAL AND OBJECTIVES OF THE RESEARCH STUDY

The goal of the study was to develop, implement and pilot test a parenting programme to enhance mother-infant attachment within the South-African socio-cultural context.

The objectives of the study were:

- To contextualise attachment between mothers and their infant children.
- To explore the potential influence of the South African socio-cultural context on caregiving behaviours of mothers that could influence mother-infant attachment.
- To develop a parenting programme to enhance maternal attachment behaviours that will support secure mother-infant attachment with consideration of the South-African socio-cultural context.
- To develop an observation scale for maternal attachment behaviour for utilisation within the South African socio-cultural context.
- To pilot test the parenting programme for mother-infant attachment.
- To explore the experiences of the mother participants of the developed parenting programme.
- To make recommendations in terms of culturally sensitive attachment-based parenting programmes in the South African context.

5.3 RESEARCH QUESTION

The study was implemented with the aim of exploring and describing a complex phenomenon, namely the potential influence of culture on maternal attachment behaviours and how it would inform an attachment-based programme and the measurement of maternal attachment behaviours in the South African context. For this purpose, an extensive amount of verbal data was collected. Consequently, the study was guided by

research questions (Fouché & Delport, 2011:64). The research questions for the study are as follows:

- What is the influence of the South African socio-cultural context on maternal caregiving that will support mother-infant attachment?
- What elements should be included in a parenting programme to enhance maternal attachment behaviours within a diverse socio-cultural context?
- What is the influence of socio-cultural factors on the measurement of attachment?

5.4 RESEARCH APPROACH

The mixed methods research approach applied to this study since qualitative and quantitative data were collected in a single study (Creswell & Clark, 2007:163). The mixed methods approach is considered a third approach, alongside the quantitative and qualitative approaches, and was applied in order to overcome the weaknesses of qualitative and quantitative research as single methodologies, and to obtain a more comprehensive understanding of the research phenomenon (Delport & Fouché, 2011:434). The mixed methods approach involves the triangulation of data collection, separates qualitative and quantitative data analysis, and focuses on the integration of these data sets in the research findings (Choi, Kapp & Green, 2010:861).

Delport and Fouché (2011:437) note that determining a research paradigm for mixed methods research has been a contentious issue as researchers viewed qualitative and quantitative research paradigms to be incompatible. A research paradigm forms a lens through which the research material is viewed and interpreted (Nieuwenhuis, 2016a:52). Based on scholarly debate, many researchers concluded that pragmatism is regarded as the best research paradigm for mixed methods research (Delport & Fouché, 2011:438). With reference to the definition of pragmatism by Teddlie and Tashakkori (2009) the authors conclude that “from a pragmatic viewpoint a study’s research question/s should thus be of primary importance - more important than either method or theoretical lens, or paradigm, that underlies the method” (Delport & Fouché, 2011:438).

The mixed methods approach thus has the advantage of neutralising any bias inherent in a single method; thereby strengthening a study. This approach is more readily utilised in social and health services research, as mixed methods studies are effective at capturing the experiences, emotions and motivations of people (Miller, Crabtree, Harrison & Fennell, 2013:2126). The mixed methods approach is effective in assessing and understanding the complexity of social problems (Bowers, Cohen, Elliot, Grabowski, Fishman, Sharkey, Zimmerman, Horn & Kemper, 2013:2158). It was therefore relevant to a study on the possible influence of culture on the attachment behaviours of mothers.

In this study, data were collected in two phases. The researcher first collected **qualitative** data on socio-cultural factors that could influence caregiving and, therefore, maternal attachment behaviours and attachment within the South African context. A qualitative approach supports researchers to investigate and record aspects of social reality (Bless, Higson-Smith & Sithole, 2013:394) and was thus suitable for data collection. Qualitative research focuses on phenomena by looking at the quality of human behaviour in detail and focuses on how individuals feel or what they think about a particular subject (Kothari, 2004:2). This research approach adds richness to many disciplines by inspiring new theories, leading to the inclusion of all population groups, and encouraging inter-disciplinary collaboration (Gergen, Josselson & Freeman, 2015:1).

For the first phase of the study, data were collected from participants in three study samples, namely mothers from different ethnic groups, social workers from different ethnic groups, and experts in the field of mother-infant attachment. The focus of data collection was on whether socio-cultural context would influence maternal caregiving behaviours that could have an impact on mother-infant attachment. This focus was thus related to the second objective of the study. The data informed the development of the parenting programme that was developed and pilot-tested in the second phase of the study. The goal of the programme was to educate mothers on caregiving behaviours that would support the development of secure mother-infant attachment.

In the second phase of the study, a **quantitative** research approach was followed to collect data on maternal attachment behaviours before and after the implementation of the developed parenting programme. Quantitative research is defined as the measurement of a quantity or amount using numerical symbols to prove research questions (Bless et al., 2013:394; Kothari, 2004:2). A self-developed measuring instrument was used for this purpose. As the researcher endeavoured to describe the relationship between variables (maternal attachment behaviours before and after exposure to the developed parenting programme), which would be measured with numbers and statistically analysed, the quantitative research approach was appropriate (Fouché & Delport, 2011:64).

In addition to the quantitative data, the researcher wished to also gain feedback on the programme. Therefore, qualitative data was again collected at this point to obtain information on the experiences of the mothers who formed the sample in the experimental group who were exposed to the programme, as described in their own words (Fouché & Delport, 2011:66).

5.5 TYPE OF RESEARCH

This study involved applied research as it focused on a concern experienced in practice (Fouché & De Vos, 2011:94; Kothari, 2004:5). The practical concern in this study related to maternal attachment behaviours within the South African socio-cultural context. Attachment theory places emphasis on the responses of the mother or primary caregiver in

the formation of either a secure or insecure attachment pattern in the infant (*cf.* Holmes & Slade, 2018:25-26, 46-47; Levy & Orlans, 2014:16, 68-69; Stern, 2002:91). Broken attachment between the mother and infant is thought to lead to personal and societal problems. As culture has an influence on caregiving practices and thus caregiver behaviours (Berk, 2013:432; Louw & Louw, 2014:135; Tomlinson, 2001:42; Tomlinson et al., 2005:1044), the study focused on whether this influence might also affect the attachment behaviours of mothers or caregivers.

Primarily, the study had an exploratory and a descriptive purpose (Fouché & De Vos, 2011:95-96). The exploratory purpose involved developing in-depth insight into socio-cultural factors in the South African context that might influence maternal caregiving behaviours that could affect mother-infant attachment, as well as on mothers' experiences of a developed programme focusing on maternal attachment behaviours. In accordance with an exploratory research purpose, these aspects were addressed by means of a qualitative study (Fouché & De Vos, 2011:95-96). The descriptive purpose of the study related to providing a description of the participants' experiences as well as describing the pre and post-test results of the developed programme and the mother participants' feedback on the programme. Descriptive studies can be based on both qualitative and quantitative research approaches (Bless et al., 2013:391; Fouché & De Vos, 2011:96).

As a parenting programme that focussed on maternal attachment behaviours was developed and pilot tested for the purpose of this study, **intervention research** as a sub-type of applied research was used. Intervention research relates to the design and development of interventions focused on specific social and health problems (Fraser & Galinsky, 2010:459; Rothman & Thomas, 2009:5). Interventions are purposeful change strategies that may focus on an individual, family, organisation or social environment, either at a local or national level (Fraser & Galinsky, 2010:459).

The process of intervention research involves delineating a problem and placing emphasis on the design and development of a programme (Fraser & Galinsky, 2011:6). The researcher needs to identify potential risk factors and match the programme theory and strategies with these risk factors. Ultimately, the effectiveness of an intervention can be assessed by the extent to which risk factors are paired with change strategies strong enough to lead to positive outcomes (Soydan, 2015:324). The potential risk in this study related to the effect that culture could have on maternal attachment behaviours that, in turn, may influence mother-infant attachment. Attachment theory and the ecological systems theory as theoretical frameworks for the study, as well as a literature review on mother-infant attachment assisted the researcher to plan a research process that would culminate in a parenting programme that could be a strategy to address the identified risk factors. The process of intervention research involves several steps, which De Vos and Strydom (2011:476) discuss according to six phases.

The first phase in the intervention research process involves identifying clients and working with gate keepers to facilitate entry and co-operation from settings, as well as identifying concerns and needs of the population, analysing identified problems, and setting goals and objectives (De Vos & Strydom, 2011:477). The researcher previously conducted a Masters' study that highlighted the effect of a break in attachment between adolescents and parents due to parental divorce. Based on this study, she became aware of a lack of information on culture and attachment, as well as of attachment programmes that consider cultural influences in a South African context. The researcher explored these concerns further in the exploratory stage of the study by means of a review of literature on key aspects of the research topic and consultation with social work colleagues to gain a better understanding of the concern, or research problem. Identifying the potential research population, for example determining the most represented ethnic groups in the Gauteng province, assisted the researcher in determining the feasibility and scope of the study. Liaison with the relevant authorities at the hospital where the researcher intended to implement the developed parenting programme was initiated at this stage. Based on these preparations, the researcher could set the goals and objectives for the study.

Phase two in the process of intervention research focuses on the collection and synthesis of information, based on existing information sources and practice examples. This phase informed the development of the intended programme for the study (De Vos & Strydom, 2011:480). The researcher conducted an extensive literature search to identify the risk and protective factors connected to the problem, as well as the main features of existing interventions to determine an intervention level and construct a theory of change (Fraser & Galinsky, 2011:26). The literature study focused on the phenomenon of mother-infant attachment and examples of existing programmes for mother-infant attachment as well as existing instruments for measuring mother-infant attachment and maternal attachment behaviours. As access to the full programmes and measuring instruments required formal training, the researcher could only rely on information available in literature and on public platforms. However, the information provided insight into elements that could be considered in the development of the parenting programme and the measuring instrument for this study.

Phase three involves the design of observational systems and determining the elements involved in the procedure of the intervention (De Vos & Strydom, 2011:482). The researcher developed a measuring instrument and scoring instructions after collecting information on mother-infant attachment behaviours. The information gathered during this phase provided the researcher with the procedural elements for designing the parenting programme and the measuring instrument that was used in the pilot testing of the programme. Implementing this phase in the intervention research process thus involved designing a prototype of the attachment-based parenting programme, planning its structure and process of delivery, and pilot testing the programme in a South African context (De Vos & Strydom, 2011:483; Fraser & Galinsky, 2010:463). Apart from planning the programme

content, training manual and methods of facilitation of the programme, the researcher also made practical arrangements with the hospital in terms of the venues in which the programme would be presented and the play sessions for the pre and post-test video recordings would be implemented during quantitative data collection.

In phase four, the prototype of a programme was pilot tested (De Vos & Strydom, 2011:484). The programme was presented at a venue at the hospital which was easily accessible to the mothers who formed part of the study sample of this phase of the study. The pilot study provided the researcher with an opportunity to reflect on possible changes to the programme and measuring instrument, which in its finalised format can be evaluated in future by other researchers. The pilot tests thus "helps to determine the effectiveness of the intervention and identify which elements of the prototype may need to be revised" (De Vos & Strydom, 2011:484).

Phase five and phase six of the intervention research process involve the advanced development of the programme and measuring instrument, and the dissemination of the programme, respectively (De Vos & Strydom, 2011:484). These phases were not implemented for the purpose of this study.

5.6 RESEARCH DESIGN AND METHODS

A mixed methods research design involves both qualitative and quantitative components (Delport & Fouché, 2011:439). In the late 20th century there has been consensus that there is much to be gained from research studies that involve both statistical analysis and in-depth case studies (Drosdova & Gaubatz, 2014:633). This study integrated both qualitative and quantitative approaches within the exploratory mixed methods design, according to which the research was carried out in two distinct phases (Delport & Fouché, 2011:441). The specific qualitative and quantitative research design and methods are discussed in the subsequent sections.

5.6.1 Research design

Research designs are defined as procedures for collecting, interpreting and analysing data as well as models for doing research (Creswell & Clark, 2007:58). As the mixed methods research design was considered to be most effective to address the research problem in this study, the specific mixed methods design that would provide the most beneficial results had to be selected.

At least 15 types of mixed methods research designs have been recently published (Bishop, 2014:8). Initially, Creswell and Clark (2007:59) identified four main mixed methods typologies, namely exploratory, explanatory, triangulation and embedded designs (Bishop, 2014:8; Delport & Fouché, 2011:441). In terms of this study, a lack of scientific knowledge on the effects of culture on caregiving practices that could affect mother-infant attachment in the South African context formed the basis of the research problem. Therefore, the study

took on an **exploratory mixed methods design** since there was a need to further explore the topic in order to gain deeper insight into the problem. Given that exploratory designs are sequential, with the first component completed before the second, this study consisted of two phases (Bishop, 2014:8). Studies that require exploration are needed when measures or instruments are unavailable, the variables are unclear or there may be no underlying theory (Creswell & Clark, 2007:75). As indicated in the problem statement and rationale for the study in Chapter 1, little research has been conducted on the effects of culture on attachment practices in South Africa and Western models for measuring maternal attachment behaviours might not be culturally relevant to this context. As a result, the variables are unknown, indicating that an exploratory mixed methods design was needed.

Exploratory mixed methods designs are therefore recommended when a problem primarily needs to be explored on a qualitative level. Such designs are important where the researcher needs to develop and test an instrument when one is unavailable, when important variables need to be identified in order to study them quantitatively, when results need to be generalised to different groups, and when a phenomenon needs to be explored in greater depth and then be measured for its effect and importance (Creswell & Clark, 2007:75). All of the above aspects were applicable to this study. In order to develop an appropriate measuring instrument of maternal attachment behaviours in a South African context, the phenomena of maternal attachment behaviours in various South African cultures had to be explored qualitatively and in-depth in order to identify important variables. The prevalence of these variables could then be measured quantitatively.

In mixed method designs, focus is placed on the timing of the qualitative and quantitative methods and on the emphasis of each method (Bishop, 2014:10), with priority given to the qualitative data over the quantitative data in this two-phase design (Delport & Fouché, 2011:441). This particular study placed a stronger emphasis on the qualitative aspect in order to first understand the variables affecting the research problem on a much deeper level. The researcher qualitatively explored the topic of the influence of culture on maternal behaviours that could affect mother-infant attachment in order to identify themes that helped to inform the quantitative exploration, which in this study focused on the measurement of the effect of the developed parenting programme with the use of a self-developed measuring instrument relevant to the South African context (Delport & Fouche, 2011:441; Jordan, Malla & Lyer, 2016:3). Although qualitative data collection is used in addition to the quantitative data collection in the pilot-testing of the programme, the strong emphasis on qualitative data in the first phase resonates with the exploratory mixed methods design.

- **Qualitative research design**

The qualitative research design which was applicable to the study and enabled the researcher to gather rich data by means of the actual experiences of the participants, was the case study design (Fouché & Schurink, 2011:321). With the integration of qualitative and

quantitative analysis, in-depth case studies are considered largely beneficial in enhancing statistical results (Drosdova & Gaubatz, 2014:633). A **collective case study design** was applied to provide in-depth information on the possible effects of culture on mother-infant attachment practices in South Africa (in the first phase of the intervention research process) and on the experiences of the participant mothers in the developed parenting programme (in the second phase of the research) (Donnelly, Brenchley, Crawford & Letts, 2013:1). The collective case study refers to an instrumental case study that is extended to a number of cases and therefore would enable the researcher to make comparisons between cases, whereas the instrumental case study is applicable to studies aimed at enhancing insight into a specific situation or issue (Fouché & Schurink, 2011:322; Nieuwenhuys, 2016:82-83).

Data were initially collected and analysed qualitatively on a case level to gain deeper insight into whether different cultures in South Africa had an influence on child rearing practices that could affect maternal attachment behaviours (Pruijssers, Van Meijel, Maaskant, Keeman & van Achterberg, 2015:307). Case study research seeks to explore real-life experiences in a natural context in which issues occur and involves the collection of in-depth information (Donnelly et al., 2013:2). Case study research is therefore an empirical exploration into a contemporary case or issue in the real world, from which one learns important information about contextual conditions pertinent to the case (Bartlett & Vavrus, 2017:901). An in-depth exploration of each participant's perceptions of the influence of culture on their caregiving practices supports the relevance of case study research.

Case study research has been criticised for separating a phenomenon from its context and for bounding a case by delimiting the object of the study, therefore separating the case from other social factors and culture (Bartlett & Vavrus, 2017:902). The use of a collective case study has, however, been found to increase external validity by means of replication and by means of selecting other cases that may produce similar or different results for an expected reason (Bartlett & Vavrus, 2017:904).

Collective case studies lead to a better understanding of how the case operates in different situations (Bartlett & Vavrus, 2017:904). Comparison across cases is encouraged on three levels: horizontally, where one uses other social factors in the environment, documents or other influences; vertically, which looks at influences on the case at different levels; and finally transversally, which is a comparison of cases over time (Bartlett & Vavrus, 2017:905). In this study, a comparison between the different cases took place, the cases were aligned to distinguish the impact of central variables and a cross case analysis was conducted (Drosdova & Gaubatz, 2014:634). For instance, all Zulu mother participants and professional Zulu participants were asked about the importance of eye contact in the Zulu culture. In the construction of themes and sub-themes during data analysis, the data gathered were then compared to those of participants from other cultures.

- **Quantitative research design**

The quantitative research design implemented in phase 2 of the research process was a quasi-experimental design, namely the **comparison group pre-test post-test design** (Dimitrov & Rumrill, 2003:159). A comparison group pre-test post-test design is defined as a design where one or more experimental groups are exposed to a treatment or intervention, and then compared to one or more comparison groups who did not receive the treatment (Dimitrov & Rumrill, 2003:159). This design is superior to other designs as it avoids extraneous variation based on the passing of time and non-comparability of the experimental and comparison group (Kothari, 2004:42). The design closely resembles an experimental design, but it differs in that the research subjects are not randomly assigned to the groups (Fouché, Delport & De Vos, 2011:150).

In this study, there was one experimental and one comparison group involved in measuring maternal attachment behaviours before and after implementing a self-developed parenting programme aimed at enhancing maternal attachment behaviours. Within the pre-test post-test design, a pre-test was implemented with both groups at the same point in time, after which the experimental group was exposed to the parenting programme. Both groups completed the post-test at the same point in time after the implementation of the programme with the experimental group. The effect of the programme on maternal attachment behaviours was measured by comparing the pre-test and post-test data of the experimental group, as well as comparing the pre-test and post-test data of the experimental group with that of the comparison group. The quasi-experimental design thus allowed the researcher to draw conclusions about causal relationships (Welman et al., 2012:88), namely the effect of the programme on maternal attachment behaviours. For ethical reasons, and in the interests of fairness, the parenting programme was presented to the comparison group after data collection for the post-test was completed.

5.6.2 Research population and sampling

In this section, the universe and population of the study will be discussed. The researcher shall then discuss the sample and the sampling methods applied to select the samples for the qualitative and quantitative phases of this study.

- **Universe and study population**

A research universe and population are formed by all the items in a field (Kothari, 2004:55). The universe is said to include all possible subjects who contain the attributes of interest to the researcher. The term population is used when narrowing the universe down, and setting boundaries on the study units. In order for a sample to be suitable to the study, it must be extracted from a clearly defined population (Uprichard, 2013:4). A universe can either be finite or infinite, but in research, the universe becomes finite when one narrows it down to form a population (Kothari, 2004:55). Individuals in the universe who possess specific

characteristics are referred to as members of the population. A sample is selected from the population and it is stated that sample selection involves knowledge of the population (Uprichard, 2013:3). This process also works inversely, where knowledge of the sample is used to make inferences about the population. In this way, increasing knowledge of cases leads to increasing knowledge of the population and vice versa (Uprichard, 2013:3).

The study population is defined as the total number of subjects from which a sample can be selected, while the sample refers to individuals that will participate in the actual research (Bryman, 2012:187). The population thus consists of subjects that specifically relates to the research problem (Welman et al., 2012:52). In this study, there were two populations; one for phase 1 and one for phase 2 of the study. The study sample was selected from each of the two populations and included a subset of subjects that were chosen from the population in order to be studied in an effort to gain knowledge about the population (Bless et al., 2013:395; Bryman, 2012: 187).

The aim of **phase 1** of the study was to obtain information on socio-cultural factors that can influence caregiving and caregiver behaviours that might affect mother-infant attachment. The unit of analysis, or elements of the population that were relevant to this phase in the study (Welman et al., 2012:52-53), were social workers and psychologists as well as mothers. The **population** for this phase were determined as social workers, psychologists and mothers in the Gauteng province. Many people living in Gauteng have moved there from other provinces in the country, resulting in an ethnically mixed population within the province (Countries Quest, 2015; Sowetan, 2012). As the researcher was interested in the potential influence of culture on attachment, participants from different cultural groups were included in the study. The researcher focused on the main Black ethnic groups residing in Gauteng, namely the Zulu, Xhosa, and Sotho, and on the White, Coloured and Asian populations (Countries Quest, 2015), which then determined the boundaries in terms of the subjects from whom the sample were selected.

Collecting a sample is considered to be an integral part of the research process, after deciding on the research design and question, and is known as the sampling method (Setia, 2016:505). A sample is defined as a sub-group of the population that is a representative selection (Latham, 2007:2). By using the word representative, each unit of the sample should represent the characteristics of a number of units in the population. The sampling method therefore involves the researcher selecting a portion of the population that will best represent the studied population and is employed by all disciplines when conducting research (Latham, 2007:2). The internal and external validity of any scientific study depends on the adequacy of the sample to meet the research aims and objectives, with accuracy (Uprichard, 2013:1).

Sampling methods are divided into probability and non-probability sampling (Grinnell & Unrau, 2011:234). Probability or random sampling implies that each member of the population has an equal chance of being selected, while non-probability sampling implies

that it is not possible to predict the probability of being included in the sample (Babbie, 2013:128; Bless et al., 2012:166). Probability or random sampling is based on chance and randomisation, such as using random samples, and non-probability or non-random sampling is based on the choice of the researcher, where the population is accessible and available, and which does not implement randomisation (Setia, 2016:506).

In this study, non-probability sampling was used to select individuals who would yield the most information about the topic under investigation. This type of sampling is regarded as most effective when participants have sensitive topics to which to respond, and when subjective judgements play a particular role (Latham, 2007:8). Through non-probability sampling, also known as purposive, deliberate or judgemental sampling, the researcher deliberately selected participants based on the understanding that the small sample that is chosen will be representative of the whole (Kothari, 2004:59). With non-probability sampling there is a high likelihood of researcher bias, which the researcher must guard against (Kothari, 2004:59).

The non-probability sampling methods of purposive and snowball sampling (Kothari, 2004:152) were employed to select three samples, namely (1) experts in the field of attachment (2) professional social workers and psychologists, and (3) mothers. Purposive sampling involved selecting a sample based on the knowledge of the population and the purpose of the study, according to certain sampling criteria (Babbie, 2013:128; Bless et al., 2013:172).

The sampling criteria applied for the selection of the sample of experts in the field of attachment, were as follows:

- Social workers or psychologists who specialised in the field of attachment; either in providing training to professionals or conduct assessments of mother-infant attachment;
- Professionals who had at least two years' experience in the specialised field;
- Professionals who were English or Afrikaans speaking.

The following sampling criteria applied to the selection of the sample of social workers and psychologists that were recruited for the study:

- Social workers and psychologists who had knowledge of the theory underlying mother-infant attachment;
- Professionals who had five or more years' experience of working in the field of family and child care;
- Professionals who could communicate in English and/or Afrikaans;
- Professionals who represented the ethnic groups of South Africa relevant to the study.

A sample of mothers were selected in accordance with the following sampling criteria:

- Biological mothers who had experience of caring for infant children within the past ten years;
- Biological mothers who represented different ethnic groups relevant to the study.
- Biological mothers that could speak English or Afrikaans.

As the researcher was not familiar with the population for the study, snowball sampling was utilised to recruit the participants as snowball sampling is relevant when it is difficult to locate members of the target population (Babbie, 2013:129). Firstly, the researcher contacted one key informant and requested that he/she suggest others who comply with the sampling criteria, who might participate in the research. The researcher recruited two professional persons and two mothers who complied with the sampling criteria and asked their assistance in suggesting colleagues and other mothers who would be eligible to participate in the study. The researcher ensured that participants were recruited to include mothers and professional persons from all the ethnic groups specified in the population for the study. However, with snowball sampling it transpired that the sample of experts were all from the White population group. In addition, the researcher attempted to recruit mothers from urban and rural areas to more accurately represent the population; however, accessibility of mothers in rural areas presented as a problem in terms of practical arrangements.

In **phase 2** of the study, the researcher designed and pilot tested a prototype of the programme developed in the study. For this phase, the unit of analysis were mother-infant dyads. The **population** consisted of mother-infant dyads attending the pre- and post-natal clinic at the Netcare Olivedale Hospital in Johannesburg. The superintendent of the clinic has provided permission for the research after ethical clearance for the study were obtained from the Faculty of Humanities Research Ethics Committee (Letter of permission attached as Appendix A).

The researcher recruited mothers and their infants from different cultural backgrounds for the study sample to offer diversity to the study (Keller, 2015:181). Purposive sampling was utilised to select a **sample** of 20 mother-infant dyads to be as representative as possible of the diverse population in the country (Kothari, 2004:59). Based on an initial estimation of the characteristics of the population of mothers and the mother-infant activities that would be relevant to the measurement of maternal attachment behaviours in this study, the following sampling criteria were set:

- Mothers between the ages of 20 and 37, with an infant child between the ages of 6 and 18 months;
- Mother-infant dyads representing different ethnic groups relevant to the study;
- Mothers who were able to communicate in English;
- Mothers who would be able to attend the developed parenting programme.

The researcher scheduled meetings with the Head of the Paediatric Unit at the Olivedale Hospital in Johannesburg, Gauteng during which the developed parenting programme and research procedures were described. Information pamphlets on the programme were then given to these gatekeepers. The paediatricians identified patients who complied with the sample criteria and provided them with the information on the programme to ascertain whether they were interested. The contact details of the interested mother patients were then given to the researcher, who contacted each potential participant. The first 20 mothers who were willing to participate in the study, who complied with the sampling criteria and who signed a written consent form, formed the sample for the second phase of the study.

For this study sample, availability or convenience sampling was also relevant (Kothari, 2004:59; Setia, 2016:506) as the research participants were those who were nearest and most easily available, which lead to a greater willingness to participate in the programme and the data collection (Setia, 2016:506). Mothers who were either patients at Olivedale Clinic or who lived nearby, were more willing to take part as the parenting programme would be presented at Olivedale Clinic.

A simple random sampling method (Babbie, 2013:135) was used to assign 10 mother-infant dyads each to the experimental group and the comparison group respectively. This method of sampling provided each mother-infant dyad with an equal chance of being selected for the experimental or the comparison group (Strydom, 2011a:228). The researcher compiled a list of the 20 participants[5] in the order that she received their written consent forms indicating that they would willingly participate in the study. Subsequently, all unequal numbers (1, 3, 5, etc.) were assigned to the experimental group and equal numbers (2, 4, 6, etc.) to the comparison group. The downside to convenience sampling is that certain groups will be more prevalent than others, and might be over-represented in the sample (Strydom, 2011a:232). During this phase of the research, two mothers withdrew from the study, resulting in a final sample of 18 mother-infant dyads, with 10 in the experimental and eight (8) in the comparison group.

5.6.3 Data collection

Data collection is defined as a process where data are collected in order to gain scientific evidence that will explain the observed behaviour of the subjects involved (Harrell & Bradley, 2009:6). Mixed methods research includes both qualitative and quantitative data collection (Creswell, Clark, Gutmann & Creswell, 2008:162). Qualitative data was collected in the first phase of the study and informed the development of the parenting programme and the observation scale utilised in the second phase of the study, whereas quantitative data were collected in the second phase of the study in the pilot testing of the programme

[5] The term participants will also be applied for the mothers in the quantitative phase (phase 2) of the study.

(Delport & Fouché, 2011:441). In addition, qualitative data were collected to obtain rich information on the participating mothers' experiences of the programme.

5.6.3.1 Qualitative data collection

In this study, qualitative data were collected by means of semi-structured interviews. Semi-structured interviews which are organised around a few planned, open-ended questions or themes were suitable to obtain rich information related to the research topic, provided in the participants' own words (Dicicco-Bloom & Crabtree, 2006:315; Welman et al., 2012:166). Semi-structured interviews are flexible, so that the researcher could explore particular issues more in-depth and gain a more comprehensive picture of the topic (Greeff, 2011:352). As semi-structured interviews are neither structured nor unstructured, the researcher was free to delve deeper and ask further questions, exploring wider than the predetermined questions in a less structured way (Kothari, 2004:97).

The procedure for a semi-structured interview is not as fixed as in a structured interview. The semi-structured interview has strengths in that it allows for in-depth information to be obtained, there is greater flexibility as there is an opportunity to restructure questions, personal information is more easily obtained, and non-responses usually remain very low (Kothari, 2004:98). Semi-structured interviews are, however, expensive and can be influenced by interviewer bias. Furthermore, certain people may be difficult to interview, making the data inadequate; in qualitative interviews participants may be less likely to report conditions or behaviours that are stigmatised; and people who possess a side-lined social status might be intimidated and not fully express themselves (Kothari, 2004:99; Palinkasa, Bazzi, Syvertsen, Ulibarri & Hernandez, 2016:24).

The researcher compiled three separate interview schedules for qualitative data collection in the study. These interview schedules were compiled so that the researcher could focus on specific questions or themes that she wanted to explore during the interviews (Greeff, 2011:352). In this manner, the interview schedules were used to guide the respective interviews in line with the focus of the data collection (Welman et al., 2012: 164, 166). In phase 1, semi-structured interviews were conducted to understand the possible influence of culture on caregiver behaviours which could affect mother-infant attachment in the South African context. Two interview schedules were compiled, namely one for the mother participants (Appendix B) and one for the professional participants, namely the social workers and psychologists as well as the professional experts in the field of mother-infant attachment (Appendix C). For the second phase in the study, a semi-structured interview schedule was compiled to explore the experiences of mother participants of the developed parenting programme (Appendix D). The interviews were audio-recorded with the permission of the participants (Dicicco-Bloom & Crabtree, 2006:318). In terms of phase 2, methodological triangulation, or the complementary use of different methods of data collection, was relevant to in-depth examination of cases in situations where the number of cases is limited (Bless et al., 2013:238; Welman et al., 2012:194).

In the first phase of the study, the researcher conducted 69 interviews with 31 mothers, 31 professionals, and 7 experts, respectively. In the second phase of the study, semi-structured interviews were conducted with the ten participants in the experimental group after completion of the parenting programme. However, two participants in the comparison group inquired whether they could also give their feedback after their attendance of the programme. Semi-structured interviews were therefore also conducted with them and their data were included in the qualitative data for this phase of the study.

5.6.3.2 Quantitative data collection

The data collected during phase 1 of the study formed the basis for the development of a culturally sensitive attachment-based parenting programme, which was implemented and pilot tested in the second phase of the study. In phase 2, the quantitative phase, data were collected by means of structured observation with the use of an observation schedule (Delport & Roestenburg, 2011:181).

Observation is a commonly used data collection method in the behavioural sciences as well as in measuring mother-infant attachment behaviours, for example in tests such as the Infant Strange Situation Procedure, the Infant CARE-Index, and the Attachment Q-Sort test (Dawson et al., 2018:3; Farnfield et al., 2010:318-319; Minde et al., 2006:547). Observation becomes a scientific tool when it is planned, recorded and subjected to systematic checks and controls on its validity and reliability (Kothari, 2004:96). When observation is done accurately, subjective bias is eliminated, information gathered is focused on what is happening presently and not complicated by past behaviours and future emotions or intentions, and it is less demanding of active co-operation of the participants (Kothari, 2004:96). Observation is most effective when studying subjects who are not capable of giving verbal reports of their feelings for various reasons (Kothari, 2004:96). Observation as a method, however, has limitations in that it is expensive, the information provided is limited, at times unexpected factors could interfere with the observational task, and some subjects may not be available for direct observation, making it difficult to collect data effectively (Kothari, 2004:96). Although structured observation is time-consuming, it leads to more objective and rigorous data collection (Delport & Roestenburg, 2011:182-183).

For the purpose of the pre-test and post-test in this study, the researcher observed maternal attachment behaviours during an eight-minute play-based session that was conducted individually with each mother-infant dyad in the study sample. To measure maternal attachment behaviours, a measuring instrument (observation schedule) was developed to collect data to pilot test the programme (Kothari, 2004:75). The mother-infant play sessions were video-recorded and observed with the use of the observation schedule, based on objective quantitative ratings and specific observation procedures (Delport & Roestenburg, 2011:182).

The researcher developed the observation schedule based on the information gained from the literature, information on existing measuring tools of attachment that were available in the public domain, and the data collected from phase 1 of the study. The collected data focused particularly on information provided by professional social workers and psychologists and by the sample of experts in the field of mother-infant attachment. The observation schedule was developed with consideration of the South African socio-cultural context. Developing the measuring instrument involved constructing operational definitions, according to which attachment behaviours are translated into well-defined variables in order to enhance the precision of observations and measurement (Babbie, 2013:71). As stated by Kothari (2004:76), it is important in research that the measuring instrument has acceptable levels of validity and reliability before being implemented. The researcher ensured that the developed measuring instrument measured maternal behaviours in a South African context accurately.

In the development of the observation schedule, the researcher focused on face, content and construct validity to enhance the validity of the study. Validity refers to the degree to which a measuring instrument accurately measures what it is intended to measure (Delport & Roestenburg, 2011:172-175; Leedy & Ormrod, 2014:91). The validity of a measuring tool is defined as the degree to which the measurement process measures the variable which it claims to measure (Delport & Roestenburg, 2011:172).

Construct validity focuses on whether the scores obtained from a measure are directly related to the variable itself (Babbie, 2013:192; Delport & Roestenburg, 2011:174). Therefore, measurement scores can be accounted for by the constructs of a developed theory (Kothari, 2004:74). In this study, three constructs from the model by Hirshmann et al. (2011:296) for measuring maternal behaviour, namely maternal sensitivity, maternal feedback and maternal interactive style, were used as the main constructs in the observation schedule. Positive maternal attachment behaviours were identified in the literature on attachment and categorised as indicators in terms of the three main constructs. *Face validity* is described as the simplest form of validity and involves developing the measuring instrument so that it appears to be measuring maternal behaviours by incorporating relevant concepts into the instrument (Delport & Roestenburg, 2011:173-174). As the items in the observation schedule were based on maternal attachment behaviours, the observation schedule, on face value, appeared to measure what was intended to be measured. *Content validity* focuses on whether a measuring instrument covers the topic studied adequately, implying that the instrument must contain indicators which can adequately measure a representative sample of the universe (Kothari, 2004:74). To ensure content validity, the content of the measuring instrument covered a range of descriptors or meanings for each indicator related to relevant maternal behaviours, so as to properly measure the attachment behaviours of mothers with their infants in a South African context (Babbie, 2013:192; Delport & Roestenburg, 2011:173). If the above-stated criteria are met, the measuring instrument can be accepted as valid.

Data collection in the different phases of the study is summarised in Table 5.1.

Table 5.1 Data collection

Phase and focus of data collection	**Participants**
Phase 1 Qualitative data collection: Semi-structured interviews to collect data on the possible effect of culture on caregiving that could influence maternal attachment behaviours and thus mother-infant attachment	69 participants from three samples: - Mothers from different cultural groups (31) - Professionals (social workers and psychologists) from different cultural groups (31) - Experts in the field of mother-infant attachment (7)
Implementation of the attachment-based parenting programme	
Phase 2 Quantitative data collection: Measurement of maternal attachment behaviours by means of the self-developed observation schedule	18 mother-infant dyads (10 in the experimental and eight in the comparison group)
Qualitative data collection: Semi-structured interview to collect data on the mother participants' experience of the parenting programme	From the above sample, 10 mothers from the experimental group and two mothers from the comparison group participated in the qualitative data collection.

Once the data were collected, data analysis was performed. Subsequently, a description of the data analysis in this study will be presented.

5.6.4 Data analysis

The qualitative and quantitative data were analysed in accordance with the data analysis process relevant to each approach. Qualitative and quantitative data analysis are described in the subsequent two sections.

5.6.4.1 Qualitative data analysis

The qualitative data analysis focused on the information gathered by means of the semi-structured interviews with the participants (mothers, social workers and/or psychologists,

experts on mother-infant attachment) in phase 1 of the study, and those with the mother participants in phase 2 of the study (Dicicco-Bloom & Crabtree, 2006:318). As mentioned in the literature, data analysis and collection must come to a point where no additional themes emerge, reaching a level of saturation (Dicicco & Crabtree, 2006:318). Qualitative data analysis involves establishing categories, applying categories to raw data by means of coding, tabulating the data and then drawing theoretical conclusions (Kothari, 2004:18). The researcher followed the steps of qualitative data analysis described by Creswell (2013:183-187), as described in the following section.

- **Transcription**

The researcher transcribed the interviews and organised the data into computer files (Creswell, 2013:183). The researcher then read through the entire data set several times in order to make sense of the data (Schurink, Fouché & De Vos, 2011:409); identifying key concepts contained in the data and making notes in the margins of the transcripts (Babbie, 2013:297).

Transcription has been critiqued because it may lose some richness by sometimes missing the congruency between cognition and affect, as opposed to video-based coding systems (Rosenblum, Zeanah, McDonough & Muzika, 2004:545). It is sometimes difficult to capture consistency across content and emotion in transcriptions; however, the researcher was careful to make field notes of emotions that were evident during the interviews and within the transcriptions. Transcribing electronically recorded interviews into text has not been sufficiently researched and is not a simple procedure for a number of reasons, amongst others that it can be difficult to transcribe the spoken word into text form because of grammar, omissions, mistaken words, and participants sometimes speaking in 'run-on' sentences (Dicicco & Crabtree, 2006:318). Transcribers often have to judge which words would be better to use or what grammar to apply, bearing in mind that the smallest grammatical changes could change the meaning of an entire sentence (Dicicco & Crabtree, 2006:318). The researcher was careful to listen to the recordings and read through the transcriptions, ensuring as much accuracy as possible between the written and transcribed word.

- **Classification**

The next step involved classification and coding of data for organisation purposes (Creswell, 2013:184-186). Classification involves arranging data into groups or classes based on their common characteristics (Kothari, 2004:123). Coding can be defined as a process where sections of a text are tagged, and then arranged with similar content into text categories for a final arrangement into major themes (Dicicco & Crabtree, 2006:318). The researcher began with open coding to identify key concepts in the data and indicated them with key words (Babbie, 2013:397). This process was followed by axial coding by regrouping the key concepts to highlight the most general or significant concepts in the data, and further by

selective coding in which patterns or relationships between these concepts were explored (Babbie, 2013:398). The researcher used the three types of coding interchangeably to categorise the data into themes and sub-themes (Schurink et al., 2011:410-413). Coding also involved the researcher writing memos or notes to herself for the purpose of reflection on the themes and patterns and linkages between them (Babbie, 2013:400; Schurink et al., 2011:415-416). Coding can either be made in the margin of the transcribed interview with a coloured pencil or on a coding sheet (Kothari, 2004:123). In this study, coding was conducted electronically in the margin of the transcribed interviews. All items in each interview were carefully coded.

- **Interpretation**

Interpretation of data involved the researcher attempting to present the point of view of the research participants in a way that is understandable to others (Schurink et al., 2011:417). The researcher interpreted the data by using available literature to understand the data related to infant caregiving practices and maternal attachment behaviours within the broader context of mother-infant attachment and ecological systems (Creswell, 2013:186-187). A deductive data analysis strategy of interpretation was employed (Manser & Mitchell, 2012:844) by looking more deeply within the conceptual frameworks of attachment theory and ecological systems theory within which data were being analysed. The researcher therefore critically reflected the value of the conceptual frameworks but furthermore looked for information in other developed existing theories and research in the process of interpretation of data (Manser & Mitchell, 2012:844). The process of interpretation has two important functions, namely establishing continuity in research through linking results of one study with another, and establishing some explanatory concepts (Kothari, 2004:344). Interpretation also provides a theoretical understanding that may assist in guiding other researchers (Kothari, 2004:344). The researcher attempted to reach these functions in this study.

- **Data representation**

The qualitative findings of the study were represented in word and visual format (Creswell, 2013:185). This step formed a vital part of the data analysis, as a research report has to provide an organised and comprehensible portrayal of the research findings (Schurink et al., 2011:419). The report makes the research communicable to others, and is therefore of utmost significance (Kothari, 2004:346). The report for this study was written in a few clear steps: the researcher first analysed the subject matter, then prepared a final outline and rough draft, and rewrote and refined the rough draft, while preparing a reference list to validate the data in literature (Kothari, 2004:347). The data were then finally represented in a clear, objective and simple manner in order to be understandable to the reader.

Based on the qualitative findings in this study, it was concluded that data saturation was achieved “at the point where all themes and categories have been saturated and new data

[were] generated" (Nieuwenhuis, 2016b:84). In this regard, data saturation was achieved in the data collected on the potential influence of culture on maternal attachment behaviours (see Chapter 6) that informed the development of the attachment-based parenting programme (see Chapter 7). Furthermore, this data correlated with the qualitative research findings that were obtained in the second phase of the study, related to the piloting of the programme (see Chapter 8).

- **Data verification**

In the process of data collection and analysis, the trustworthiness or validity of the study is an important issue to be considered (Kothari, 2004:20). The analysis of data must be sufficiently adequate to display the importance of the data. The methods of analysis should also be appropriate, and conclusions must be restricted specifically to what has been proven by the data (Kothari, 2004:20). Therefore, the research findings must reflect the meanings described by participants as accurately as possible.

Trustworthiness of this study was an important consideration which was closely followed. Data verification focuses on the credibility and quality of the research, and on applying criteria that will ensure rigor in a study (Cope, 2014:89; Morse, 2015:1212). Bless et al. (2013:236) relate trustworthiness of qualitative data to four concepts: credibility, transferability, confirmability and dependability.

Credibility refers to the actual truth of the views of the participants and data as well as the truth of their interpretation and representation by the researcher (Cope, 2014:89). In qualitative research, the data are considered credible if the descriptions of human experiences are verified by other individuals sharing the same experiences (Cope, 2014:89). In order to prove credibility, a researcher must show her engagement with her participants, her methods of observation, and her audit trails (Cope, 2014:89). Credibility also involves triangulation, peer debriefing, and member checks (Morse, 2015:1212). The credibility of this study was enhanced by reflexivity and peer debriefing (Schurink et al., 2011:420).

The researcher engaged in peer debriefing by means of discussions with a colleague to enhance the researcher's understanding of the topic (Lietz, Langer & Furman, 2006:451). In addition, the researcher engaged in reflexivity as she guarded against approaching the research with preconceived ideas on attachment, culture, and the qualitative experiences of mothers who participated in the attachment-based programme. Reflexivity involved the researcher being constantly aware of personal bias which could affect the objective analysis of data (Lietz et al., 2006:447-448).

Although transferability may be problematic in qualitative research, triangulation of data collection methods and a well documented description of the research methods were followed in order to enhance the transferability of the study (Bless et al., 2012:237; Schurink et al., 2011:420). Transferability is defined as the findings from a study being easily

generalised or transferred to another similar context, group or setting (Plummer, 2017:346). The results must therefore have meaning for those individuals who are not involved in the study so that other readers can understand the results and identify with them in terms of their own experiences (Cope, 2014:89). Transferability is similar to the concept of generalisability or external validity (Plummer, 2017:346). These steps, and a continuous critical evaluation thereof, were implemented by the researcher to enhance the objectivity of the research process and contributed to the confirmability of the research (Bless et al., 2013:237; Schurink et al., 2011:421).

Confirmability serves to prove that the researcher is not biased, and that the data reflects the responses of the participants alone (Cope, 2014:89). The researcher was able to confirm the responses were authentic by means of describing how interpretations and conclusions were formed and proving that the findings were derived from the data itself, by providing rich quotes of the participants in displaying each important theme. Confirmability is connected to the concept of neutrality or objectivity (Plummer, 2017:345). Objectivity and neutrality are proven when the findings came from the participants and from the context of the discussion alone (Plummer, 2017:345).

The last concept to be discussed with regards to data verification in this study, is dependability. This concept refers to the consistency of the data obtained, where another researcher would come to the same research findings and conclusions when following the audit trail of the data (Plummer, 2017:345). Dependability is closely associated with reliability. In this study, the credibility and dependability of the study were enhanced by the researcher adhering to a relevant research design and research methodology, and a detailed description of the entire research strategy (Bless et al., 2013:236; Sinkovics & Alfoldi, 2012:822).

5.6.4.2 Quantitative data analysis

Quantitative data analysis proceeded independently from qualitative data analysis in this study (Creswell, Clark, Gutmann & Creswell, 2008:187). The quantitative data analysis focused on the pre-test and post-test scores obtained by the use of the measuring instrument, and on the frequency of the attachment behaviours observed based on the video-recordings of the mother-infant play sessions (Delport & Roestenburg, 2011:182). Descriptive statistics were applied to provide a description or summary of the data obtained, by counting the frequency with which certain behaviours occurred and ordering the data for presentation (Fouché & Bartley, 2011:257; Welman et al., 2012:231).

Descriptive analysis is the study of how variables are distributed, therefore looking at the distribution of scores and the degree of variation between scores (Kothari, 2004:130). Furthermore, bivariate analysis was applied to determine the impact of the independent variable (the attachment-based parenting programme) on the dependent variable, maternal attachment behaviours (Babbie, 2013:438). The influence of the developed attachment-

based programme was determined by means of the comparison of data from the pre-test, before the programme was implemented, with the data from the post-test, after the programme was implemented with the experimental group but, at that stage, not with the comparison group. The observation schedule involved a qualitative description of a number of indicators, with specific criteria set out for each indicator, against which the maternal behaviours were observed and rated (Kothari, 2004:79).

The researcher completed an observation schedule, as will be described in Chapter 7, for each mother-infant dyad as a pre-test and post-test, based on video-recordings of the individual mother-infant play sessions. The researcher's scoring was supplemented by an independent observer who was trained by the researcher to score target behaviours observed in the video recordings in accordance with specific indicators, in order to enhance the reliability of the findings (Bless et al., 2013:226; De Vos & Strydom, 2011:486; Welman et al., 2012:223). The independent observer had past experience in the field of parent-child attachment. The researcher and independent observer independently scored the observations related to each indicator in two-minute intervals in the video recordings, and discussed their observations afterwards to clarify any points of confusion. The independent observer analysed only a subset of the sample that was randomly selected. The scores of the independent observer were used to validate the consistency of the scoring by the researcher, focusing on inter-rater reliability (Bless et al., 2013:226). However, focusing only on a subset of the sample, the independent observer's scores were not included in the quantitative research results.

Descriptive statistics were used to calculate the mean and standard deviation per construct (i.e. maternal sensitivity, maternal interaction style, and maternal feedback) that were used for measuring maternal attachment behaviours at both pre and post-test level for the experimental and the comparison group (Pietersen & Maree, 2016:208-210). The standard deviation indicates "the average spread of the scores from the mean and therefore is usually reported along with the mean" (Fouché & Bartley, 2011:261-262).

To determine whether there was a statistical difference between the pre and post-test scores within the experimental group the Wilcoxon signed-rank test was utilised. This test was appropriate as the sample size was small, i.e. less than 30, and it cannot be assumed that there would be a normal distribution (Pieterson & Maree, 2016:256-257). The Mann-Whitney test was implemented to determine whether there was a statistical difference between the experimental and comparison groups at the post-test level. This non-parametric test was used as the sample size for both the two independent groups (experimental and comparison groups) were small, without assuming a normal distribution (Pietersen & Maree, 2016:259). In both the Wilcoxon signed-rank test and the Mann-Whitney test, the statistical significance was determined based on the criterion that p was smaller than 0.05 (Fouché & Bartley, 2011:274). The calculations were done with SPSS Version 25.

The reliability or internal consistency of the measuring instrument was determined by means of Cronbach's Alpha coefficient (Delport & Roestenburg, 2011:177-178). Generally accepted guidelines for the interpretation of the Cronbach's Alpha coefficient suggest 0.90 as a high reliability, 0.80 as moderate reliability, and 0.70 as low reliability (Pieterson & Maree, 2016:239). The Cronbach's Alpha coefficient in this study is reported as follows: Construct 1: α=0.498; Construct 2: α=0.846; and Construct 3: α=0.697. In this study, it was indicated that the reliability of Construct 1 might improve if Item 4 is changed or reverse coded.

5.7 PILOT STUDY

The researcher conducted a pilot study for both the qualitative and quantitative phases of the study. A pilot study refers to a small-scale study prior to the main research study to test whether the research methods are appropriate and adequate (Bless et al., 2012:394).

For the **qualitative** data collection, the different interview schedules were pilot tested to ensure that the questions were clear and would enable the researcher to obtain the required information relevant to the respective purposes of data collection. A pilot test in the first phase of the study was important to avoid compromising the quality of the data that formed the basis for the development of the parenting programme and observation schedule and the pilot-testing of the parenting programme in the second phase of the study (Bryman, 2012:223). The pilot test was conducted with two mothers and two social workers who complied with the sampling criteria for the study. The interview schedule for the second phase of the study, focussing on feedback on the programme, was pilot-tested with a mother of the comparison group who thus complied with the sampling criteria for this phase but who was not included in the experimental group who provided feedback on the parenting programme. During the pilot study of the interviews, it was found that certain concepts might be unclear to some of the research participants and required further explanation by the researcher. The researcher kept these aspects in mind during the data collection interviews.

For the **quantitative** data collection in phase 2 of the study, the researcher pilot-tested the observation schedule using a video recording of an eight-minute mother-infant play session, based on voluntary participation, under similar conditions as planned for the final data collection. The goal of the pilot test was to determine whether the newly developed measuring instrument contained appropriate and adequate indicators for the measurement of maternal attachment behaviours. Bless et al. (2013:148) and Strydom (2011a:240-241) emphasise the importance of a pilot test in the form of field testing with a limited number of subjects when developing a new measuring instrument. For ethical reasons, the participant in the pilot test was presented with the opportunity to attend the attachment-based programme together with the comparison group; however, she did not participate in the pre and post-testing for the research.

In the last section of this chapter, the researcher reviews the ethical considerations that were followed in the study.

5.8 ETHICAL CONSIDERATIONS

Ethical considerations refer to the protection of the rights of persons who participate in research (Welman et al., 2012:181). This research study was guided by the ethical principles that are discussed in this section. The researcher obtained ethical approval for the research from the Faculty of Humanities Research Ethics Committee of the University of Pretoria (Appendix E).

5.8.1 Beneficence and avoidance of harm

The avoidance of harm is the most fundamental research principle (Bless et al., 2013:29; Strydom, 2011b:115). Thus, there must be no harm on a physiological, emotional and social level to the participants in a study (Stoljar, 2011:375). As a measure to avoid harm, the participants in this study received comprehensive information on the research in the letters of informed consent, including all possible risks, so as to offer them the opportunity to decline participation or to withdraw from the study at any time (Strydom, 2011b:115).

In the first phase of the research, semi-structured interviews were conducted with a sample of professional persons, namely social workers and/or psychologists and experts in the field of mother-infant attachment. The interviews focused on work-related, rather than on personal matters, thus no harm was foreseen for these participants. However, the researcher was cognisant that the mother participants in this phase of the study might be more likely to experience emotional distress based on exploration of their caregiving behaviours. The interviews were thus conducted in a non-judgemental way, with sensitivity to the participants' caregiving practices and cultural views. The researcher was also sensitive to the historical attachments of the mother, so as not to open old wounds and cause harm.

Infants can be regarded as a vulnerable research population (Bless et al., 2013:33-34). For this reason, the researcher planned the play-based sessions on which the quantitative data of the pre-test and post-test would be based, to be aligned with generally accepted procedures for measuring maternal attachment behaviours. The procedures included safety, privacy and brief duration of the sessions. Participants who were deemed vulnerable, for example infants who were physically ill, were not included in the study (Strydom, 2011b:115).

The well-being of all research participants was kept in mind during the entire research process and in implementing the different methods of data collection. In the event of emotional distress as a result of participation in the study, the particular participant would be referred for personal or telephone consultation to a social work colleague in the vicinity of the clinic with whom the researcher made arrangements beforehand (Bless et al.,

2013:33). This provision was stated in the letters of informed consent. However, none of the participants needed to be referred for counselling.

The ethical principle of beneficence refers to doing research effectively that will promote and add to the welfare of society (Orb, Eisenhauer & Wyanaden, 2000:95). The promotion of maternal behaviours that could enhance mother-infant attachment is an intervention that can enhance sensitive care and the mother-infant bond, benefitting the psychosocial development of the infant and enhancing her functioning throughout life (Berk, 2013:428-429; Mahler et al., 2000:40). Beneficence is also determined by the competence of the researcher (Bless et al., 2013:29). The researcher developed the attachment-based parenting programme based on a thorough literature review and informed herself on the influence of the socio-cultural context through information obtained from mothers and social workers and/or psychologists from different ethnic groups in South Africa, as well as from experts who were knowledgeable on attachment. The intention was always a positive one aimed at enhancing the attachment between mother and infant. For this reason, the attachment-based parenting programme was also presented to the comparison group after the post-test, to ensure all the participants benefitted from the study.

5.8.2 Informed consent and voluntary participation

Informed consent is defined as conscious and willing consent to participate in a study, and to have information collected about oneself with regards to the research problem (Fouka & Mantzorou, 2011:5). Informed consent is the right of participants to self-determination (Stoljar, 2011:375). Prospective participants need to know what the research is about, the potential risks, benefits and influence of participation, that participation is voluntary, and that they can terminate their participation without any harmful consequences (Bless et al., 2013:32; Strydom, 2011b:117).

All participants were asked to sign a letter of informed consent (Choi et al., 2010:861). Four letters of informed consent were drafted, of which two were applicable for the first phase of data collection and two for the second phase of data collection in the study. For the first phase of data collection, an informed consent letter was drafted for the professional persons, namely the social workers and/or psychologists and experts in the field of mother-infant attachment (Appendix F). Another letter of informed consent was drafted for the sample of mothers (Appendix G). For the second phase of data collection, an informed consent letter was drafted for the mother participants in the experimental group (Appendix H) and one for those in the comparison group (Appendix I). The letters of informed consent contained comprehensive information on the research, the purpose and procedures that were followed, expectations about participation, and possible risks and benefits of the research for the participants (Bryman, 2012:135; Fouka & Mantzorou, 2011:5). Furthermore, written permission to audio record the semi-structured interviews with the professional persons and the mothers who were interviewed in the first and in the second phase of data collection were obtained. For the participants in the experimental and

comparison group in the second phase of data collection, the letters of informed consent also included permission to video record the mother-infant play-based sessions for the pre-test and post-test, and for observation of the video recordings by an independent observer. Providing detailed information on the nature and duration of the mother-infant play sessions that were recorded and of the developed programme was a critical aspect in the latter informed consent letters. This was done for the mothers to be given the opportunity to make informed decisions that were in the best interest of their infant child and themselves.

As informed consent involves providing participants with comprehensive and accurate information about the research, no deception of the participants took place. Deception refers to withholding information on the true nature of the research or providing participants with incorrect information in an attempt to convince potential participants to participate in the research (Bless et al., 2013:23; Strydom, 2011b:119).

5.8.3 Respect for anonymity, confidentiality and privacy

Confidentiality emphasises how a researcher will protect the identity and privacy of the participants by not allowing others to link participants to their personal responses, while anonymity refers to protecting the identity of the participants from others, including the researcher (Fouka & Mantzorou, 2011:6; Strydom, 2011b:119-120). Maintaining confidentiality is not easy, more particularly in qualitative research, when the sample is small, and reports show interview quotations (Fouka & Mantzorou, 2011:6). The researcher ensured that the names of the participants were not mentioned so that there was no link between the participant and the data concerned, and that data were stored and locked so that there was no unauthorised access to the data (Stoljar, 2011:375). Strydom (2011b:119) emphasises that privacy also implies that participants have the right to decide to what extent they wanted to share their views and beliefs. This component of privacy was important for the researcher to be sensitive to cultural norms that might influence participants' sharing of information during the semi-structured interviews.

The risks to the invasion of privacy with regards to the observation of the mother-infant play sessions were acknowledged by ensuring that the observed mother-infant interaction occurred in a private space in which both the mother and infant were comfortable (Bryman, 2012:135). The exact methods used to protect the participants' confidentiality were explained, such as identifying details being omitted on the observation score sheets, the transcripts of interviews, and in the research report. The play-based observation sessions were conducted in a venue that ensured privacy (Fouka & Mantzorou, 2011:6). The independent observer was required to sign an agreement of confidentiality (Appendix J). At the completion of the research, the raw data were securely stored at the Department of Social Work and Criminology, according to the stipulations of the University of Pretoria.

5.8.4 Debriefing

The researcher debriefed all the participants in the study at the end of their involvement in the study (Fouka & Mantzorou, 2011:6; Strydom, 2011b:122). Debriefing ensured that all questions that participants might have had were answered and any confusion clarified. Debriefing also provided the participants with the opportunity to reflect on their experiences of the research (Welman et al., 2012:118). This ethical consideration is an important method of minimising harm in spite of prior precautions to prevent harm (Strydom, 2011b:122). Given the involvement of infants in the second phase of the study, the researcher regarded debriefing as a critical step in ensuring the well-being of the mothers and infants at the end of their involvement in the research by providing the mothers with sufficient time to reflect on the play sessions and clarify any misconceptions.

5.8.5 Actions and competence of the researcher

The researcher is a registered social worker and conducted a previous research study on the topic of attachment on a master's degree level. The research was implemented according to a clearly described research procedures and methodology. The researcher conducted the research in an ethically correct manner and refrained from making value judgements about the participants, as guided by research ethics (Strydom, 2011b:123-124) as well as by the ethics of the social work profession. Objectivity and refraining from making value judgements are particularly important when working with research participants from cultural backgrounds that are different to that of the researcher (Strydom, 2011b:124); as was relevant to this study.

Beforehand, the feasibility of the study was analysed before investing considerable time and money embarking on it. The feasibility of a study is defined by how successfully a study can be completed by taking note of all the factors which could impact the study, namely economic, technological, legal, financial and personal factors (Kuyper, 2016:418). In order to confirm the feasibility of a study, it was important for the researcher to read relevant literature and have discussions and interviews with experts in the field. To ensure the applicability and relevance of the study, the researcher carefully considered the cultural groups to be included in the study (Kuyper, 2016:422). Furthermore, the researcher reviewed the practical circumstances in which the research would be undertaken to ensure that the research is practically viable (Lawford-Smith & Gilabert, 2012:811).

The researcher's actions and competence furthermore related to ethics in data analysis and reporting. The research findings were accurately analysed and reported, risks to participants were safeguarded sufficiently, and plagiarism were avoided at all costs (Bless et al., 2013:35; Strydom, 2011b:123).

5.8.6 Publication of findings

The research findings have been compiled into a research report in which the researcher accurately and objectively presents the research findings and the limitations of the study (Bless et al., 2013:35; Strydom, 2011b:125). Research participants and the hospital from where the sample was obtained were would be granted access to the final report, at request.

5.9 SUMMARY

This chapter contained a description of the research methodology and the ethical considerations that were followed in conducting the study. Considering the goal, objectives and research questions for the study, the mixed methods research approach, intervention research, and exploratory mixed methods design were described. Discussion of the two phases of data collection, the study samples relevant to each phase and the qualitative and quantitative data collection methods and data analysis processes were described to provide an overview of how the research would be implemented. Importantly, the ethical considerations underlying the implementation of the research were also highlighted.

Following the sequential procedure of the exploratory mixed methods design applied in this study, the researcher would first conduct an in-depth qualitative exploration of the phenomenon being studied. The data obtained would form the basis for the development of the intervention and measuring instrument relevant to the study.

The research findings based on the in-depth qualitative data collected during the first phase of data collection will be presented in Chapter 6 as background to the description of the development of an attachment-based parenting programme and measuring instrument in Chapter 7. The data collected for the pilot-testing of the developed prototype of the programme are presented in Chapter 8. Ultimately, both qualitative and quantitative results are integrated into a discussion of conclusions and recommendations in Chapter 9.

CHAPTER 6

QUALITATIVE RESEARCH RESULTS: FIRST PHASE OF DATA COLLECTION

6.1 INTRODUCTION

The research findings based on the data collected from the three sample sets in the first phase of the study, namely mothers who represented the different ethnic groups relevant to the study, professional social workers or psychologists who had knowledge of attachment theory and experience in the field of family and child care, and professional social workers or psychologists who are experts in the field of attachment. In this chapter, the themes and sub-themes identified in the collected data are described and discussed. These findings, together with the literature review, informed the development of the attachment-based programme, as well as the development of the measuring instrument that was used to measure maternal attachment behaviours towards their infant babies.

The research problem for this study was formulated as a lack of knowledge regarding the effect of culture on attachment. Although research has been conducted on the socio-economic and psychological impact of the developing economic context in South Africa on attachment (Tomlinson et al., 2005:1044), insufficient research has been conducted on the effects of various cultural behaviours and views on attachment practices. Therefore, the effects of culture on maternal attachment behaviours was a focus in this research study. The content of this chapter relates to the second objective of the study, namely to explore the potential influence of the South African socio-cultural context on caregiving behaviours of mothers that could influence mother-infant attachment.

Phase 1 of this study was based on a qualitative research approach. Semi-structured interviews were applied as a data collection method that were suitable to learn about the participants' perceptions related to the topic, and were flexible to enable the researcher to explore particular issues in-depth and gain a more comprehensive picture of the topic (Dicicco-Bloom & Crabtree, 2006:315; Greeff, 2011:352; Welman et al., 2012:166). The researcher followed the steps of qualitative data analysis described by Cresswell (2013:183-187) to identify the themes and sub-themes that will be presented as the research findings. Firstly, the demographic profile of the research participants will be provided.

6.2 DEMOGRAPHIC PROFILE OF RESEARCH PARTICIPANTS

The researcher discusses the demographic profile of the participants as a first step in presenting the qualitative data findings. Three sets of samples[6] were interviewed, namely 31 mothers, 7 experts in attachment, and 31 professionals. In total, 69 research participants

[6] In this research report the three samples are referred to as mothers, professionals and expert participants in order to ensure clarity of reading.

were interviewed. The demographic information is presented for each sample separately in the three tables.

Table 6.1 Biographical profile of research participants (mothers)

PARTICIPANT	AGE	AGE OF YOUNGEST CHILD	CULTURE	PLACE OF RESIDENCE
1	46 years	7 years	White	Urban
2	31 years	3 months	White	Urban
3	44 years	4 years	White	Urban
4	27 years	2 months	White	Urban
5	34 years	5 months	Coloured	Rural-Childhood Urban-Adulthood
6	27 years	4 months	Coloured	Rural-Childhood Urban-Adulthood
7	38 years	7 years	Zulu	Urban
8	31 years	6 years	Zulu	Urban
9	48 years	10 years	Xhosa	Urban
10	26 years	2 years	Sotho	Rural-Childhood Urban-Adulthood
11	26 years	3 years	Sotho	Rural
12	32 years	8 months	Zulu	Urban
13	34 years	1 year	Indian	Urban
14	41 years	7 years	Indian	Urban
15	28 years	1 year	Xhosa	Rural
16	23 years	5 years	Zulu	Rural
17	30 years	2 years	Zulu	Rural
18	18 years	4 months	Xhosa	Rural
19	19 years	1 year/ 2 months	Sotho	Rural
20	32 years	6 years	Indian	Urban
21	31 years	6 years	Sotho	Rural
22	29 years	9 months	Sotho	Urban
23	27 years	9 months	Xhosa	Urban
24	24 years	4 years	Zulu	Rural
25	30 years	1 month	White	Urban
26	41 years	9 years	Indian	Urban
27	37 years	2 years	Coloured	Urban
28	35 years	6 years	Coloured	Urban
29	23 years	1 year	Coloured	Urban
30	37 years	2 years	Xhosa	Urban
31	34 years	2 years	Indian	Urban

The sample was representative of the South African context, with a distribution of five Xhosa, five Sotho, six Zulu, five white, five coloured, and five Indian participants for the mother participants. A broad range of race groups were included in this sample as the effect of the different South African cultures on maternal attachment behaviours was the focus of the research.

As the study is focused on attachment and how it affects attachment behaviours of mothers, the gender of all the participants in the sample of mothers is female. As is evident the age of the mother participants ranged from 18 to 48 years of age, with 14 participants between 30 to 39 years of age, 10 between 20 and 29 years of age, 5 between 40 and 48 years, and 2 between 18 and 20 years of age.

In terms of occupation, five of the mother participants were unemployed and 23 were employed occupying a variety of professions, while three were engaged in further studies. An under-graduate degree was the highest level of education with seven mothers having a diploma and 18 mothers an undergraduate degree, five mothers without a Grade 12 level of education and one mother still a student. The mother sample were all fluent in English, except for the rural Zulu and Sotho mothers who struggled with English, speaking Zulu and Sotho as a first language.

The place of residence was considered important as a thorough understanding of each representative cultural group was considered to be better obtained where less acculturation had occurred. Thus, it was important to also interview mothers living in rural areas, as well as urban areas. In the study, 23 of the mother participants lived in urban areas (although three grew up in rural or semi-rural areas), and eight of the mother participants still lived in rural areas.

As is clear from table 6.1, 18 of the children were between 0 and 2 years of age (with twelve being one year or younger), four were between 3 and 5 years of age, seven between 6 and 8 years, and two between 9 and 10 years of age. Thus, the majority of children (18) in the study were between 0 and 2 years of age. The focus in this study is on infants between 6 and 18 months of age, thus the researcher attempted to recruit mothers with younger children to be interviewed for phase 1.

Table 6.2 Biographical profile of research participants (professionals)

PARTICIPANT	AGE	OCCUPATION	YEARS OF EXPERIENCE	CULTURE	PLACE OF RESIDENCE
32	32 years	Social worker	9 years	White	Urban
33	60 years	Social worker	5 years	Coloured	Urban
34	32 years	Social worker	10 years	Indian	Urban
35	33 years	Social worker	9 years	Xhosa	Urban
36	27 years	Social worker	3 years	Xhosa	Urban
37	41 years	Social worker	12 years	White	Urban

38	41 years	Social worker	3 years	Zulu	Urban
39	28 years	Social worker	5 years	Zulu	Urban
40	40 years	Social worker	12 years	Sotho	Urban
41	50 years	Social worker	15 years	White	Urban
42	30 years	Social worker	2 -3 years	White	Urban
43	50 years	Social worker	2-3 years	Sotho	Urban
44	41 years	Psychologist	9 years	Indian	Urban
45	27 years	Social worker	2-3 years	Xhosa	Urban
46	39 years	Social worker	2 years	Xhosa	Urban
47	46 years	Social worker	17 years	Coloured	Urban
48	32 years	Social worker	9 years	White	Urban
49	32 years	Social worker	8 years	Xhosa	Urban
50	35 years	Social worker	12 years	Coloured	Urban
51	29 years	Psychologist	3 years	Xhosa	Urban
52	37 years	Social worker	10 years	Coloured	Urban
53	30 years	Social worker	5 years	Sotho	Urban
54	42 years	Social worker	3 years	Sotho	Urban
55	32 years	Social worker	3 years	Sotho	Urban
56	47 years	Social worker	23 years	Indian	Urban
57	40 years	Social worker	14 years	Indian	Urban
58	47 years	Social worker	23 years	Indian	Urban
59	27 years	Social worker	8 years	Coloured	Urban
60	37 years	Social worker	4 years	Zulu	Urban
61	35 years	Psychologist	5 years	Zulu	Urban
62	30 years	Social worker	7 years	Zulu	Urban

In the professional sample, 30 of the participants were female, one male. The sample was representative of the South African context, with a distribution of six Xhosa, five Sotho, five Zulu, five white, five coloured, and five Indian participants.

A post-graduate degree was the highest level of education for the professional participants. In the sample group of professionals, they were either qualified social workers or psychologists, all having post-graduate degrees. The topic is considered to be relatively complex and intellectual in nature; therefore, it was considered advantageous that participants had obtained undergraduate and postgraduate degrees, as this led to deep, meaningful discussions in the interviews. The interview questions were, however, drawn up to be simple and clear for participants of all education levels.

All the participants in the professional sample lived in urban areas and were fluent in English. The coloured participants also spoke Afrikaans as a second language. The Zulu, Xhosa and Sotho participants all spoke their respective African languages as a first language.

Table 6.3 Biographical profile of research participants (experts in field of attachment)

PARTICIPANT	AGE	OCCUPATION	YEARS OF EXPERIENCE	CULTURE
63	63	Educational psychologist	24	White
64	56	Social worker	30	White
65	49	Social worker	22	White
66	42	Social worker	18	White
67	52	Social worker	30	White
68	53	Educational psychologist	23	White
69	41	Educational psychologist	14	White

When recruiting professional experts in attachment as participants, the researcher struggled to find participants who were racially representative. This can be considered a limitation of the study. As indicated in Table 6.3, four of the professionals were Social workers and three were Educational psychologists in the field of parent-child work.

In the expert sample, 7 participants were female and one male. The seven experts all lived in urban areas. A post-graduate degree was the highest level of education for the expert participants.

6.3 QUALITATIVE RESEARCH FINDINGS

In this section, the themes and sub-themes that were identified during the process of data analysis, will be presented. An outline of the themes and sub-themes are provided in Table 6.4.

Table 6.4: Themes and sub-themes

1. Attachment is an innate quality	1.1 Attachment is a biologically-based connection between mother and infant
	1.2 Sensitive care is valued across cultures
	1.3 Lack of knowledge about attachment
2. The influence of culture	2.1 Culture could influence attachment
	2.2 The role of historical attachments
	2.3 The role of acculturation
3. Primary and secondary attachment figures	3.1 The mother as primary attachment figure
	3.2 The role of the father

	3.3 The role of the extended family
	3.4 Involvement of the grandmother
	3.5 Involvement of older siblings
4 The concept of sensitive care	4.1 A stronger focus on the infant's physical needs
	4.2 Attending to the emotional needs of infants
	4.3 Responding to infant cues
5 Parenting practices that might affect attachment behaviours	5.1 Breastfeeding as a bonding practice
	5.2 Co-sleeping
	5.3 Carrying the baby on the mother's back
	5.4 Attention could spoil a baby
	5.5 Face-to-face interaction and quality time with infant
	5.6 Mother-infant play
	5.7 Views on discipline
6 Socio-economic circumstances	6.1 The effects of poverty and adverse conditions
	6.2 Modern lifestyle and overwhelming responsibilities
	6.3 Single parenthood and teenage pregnancy
7 Suggestions for content of an attachment programme for the South African context	7.1 Knowledge of attachment and the importance thereof
	7.2 The concepts of responsiveness and sensitive parenting
	7.3 Parenting skills and parenting styles
	7.4 Maternal self-regulation
	7.5 Interaction between mother and infant
	7.6 The role of historical attachments

	7.7 Individuality of infants, parenting and contexts
8 Measurement of attachment	8.1 Use existing test and indicators as guidelines
	8.2 Maternal sensitivity and responsiveness
	8.3 Tracking of the baby
	8.4 Eye contact
	8.5 Touching and holding the infant
	8.6 Soothing the infant
	8.7 Infant proximity and separation anxiety

The themes and sub-themes will be discussed next. The discussion of the sub-themes will be illustrated with direct quotes by the participants and integration of relevant literature.

6.3.1 Theme 1: Attachment is an innate quality

This theme was dominant throughout the interviews in phase 1. The participants across all represented cultures voiced a general pattern of feeling an innate need to connect to their infants despite a lack of knowledge about attachment, and believed in providing sensitive care to their infants, irrespective of the culture of the mother and infant. This theme is presented in three sub-themes as indicated in table 6.4 above.

Sub-theme 1.1: Attachment is a biologically-based connection between mother and infant

The view that attachment is a biologically-driven process, innate to all mother-infant connections, was especially evident in the views of the experts on attachment. A number of professional participants emphasised the opinion that attachment is originally an innate tendency and occurs as a result of a natural biological drive. The professional participants stated that other social, economic and psychological factors in the micro, meso and exosystem play a role in attachment, but that attachment is largely an internal instinctual driving force between mother and child (Amoateng & Kalule-Sabiti, 2013:133). The following quotes by the experts reflect a general pattern on this sub-theme:

- “Across all the cultures that I’ve worked with over the years and in the reading that I’ve done, there are huge similarities in practices across the world and certainly in South Africa that support the building of and strengthening of a relationship between primary caregiver and their baby.” Participant 69 (Expert)
- “Attachment carries a biological function with a cultural expression.” Participant 66 (Expert)

- “When you are looking at attachment … So, when you look at a little baby, a baby will definitely respond more favourably to a primary caregiver. So if it’s the mother’s face he recognises, you will see the behaviour shows you clearly that he’s happy to see or she’s happy to see the mommy.” Participant 64 (Expert)

The professional persons mostly held similar views on this topic. Some of these participants expressed the following:

- “Bonding and nurturing is an innate thing across cultures ... In most cultures, there is a lot of value placed on nurturing children. … [In] most African cases there doesn’t seem like there’s an attachment issue; they become more attuned with their babies.” Participant 34 (Indian professional)
- “… understanding and trying to understand what the baby needs at that moment is a universal practice.” Participant 51 (Xhosa professional)
- “If you are a mom then you would know, if you are not a mom then my understanding would be much different from the one who has a child.” Participant 45 (Xhosa professional)

Mother participants supported the notion that attachment is an instinctive process:

- “I believe it’s an instinctive understanding and connection that you have with your baby of when it’s happy, cold, sick ... Its intuition and I think that that early bonding of holding and feeding brings a closeness and intuitive understanding of what baby needs and wants and what to give.” Participant 3 (White mother)
- “I feel like a child really has a bond with you from the time that they’re in your womb ...” Participant 31 (Indian mother)
- “Because with the second baby I realised that the need to be with the child, to hold the child, to play with the child, to kiss the child, to touch the child gives a sense of understanding of your child.” Participant 30 (Xhosa mother)
- “I don’t know if it’s culture, but I just felt that if they were crying, they needed to be responded too if it was a wet nappy or they were hungry, you needed to sort that out and then the baby would be settled. So, you also become in tune with your baby, and you know when they need to be picked up.” Participant 1 (White mother)

The view of attachment as largely an internal instinctual driving force between mother and child was strongly supported by the experts, professionals and mothers in the study samples. The mother participants spoke of a deep, inner need to connect, protect and nurture their babies. The professional and expert participants spoke of attachment being intrinsic, while environmental factors play a role in attachment behaviours. In this regard, it is noted that evolutionary theories of human adaptation have drawn from the view that children strive to survive through their instinctual behaviours and built-in signals that keep

attachment figures close, such as crying, grasping and suckling when hungry, as was done by early humans living in dangerous circumstances (Miller & Commons, 2010:2). Evolutionary theories state that such behavioural tendencies are built into a species over the course of evolution as a contribution to the survival of that species (Sigelman & Rider, 2009:407).

Researchers explain that by taking good physical care of their infant babies, parents ensure the survival of their young and the continuation of their genes. Ethology is defined as a species-specific system of behaviours that leads to certain predictable outcomes, and involves inherent inner innate motivation where the set goal of the infant/child is proximity to the mother for survival purposes (Berk, 2013:23; Funamoto & Rinaldi, 2014:4). Much research has been conducted on Bowlby's ethological theory on attachment, which supports the idea that the attachment behavioural system between mother and child is based on inherent, biologically driven processes (Vicedo, 2017:3).

Although research has confirmed the importance of culture, and criticised initial attachment theory's monotropic view of attachment between mother and child (Bain, 2014:591; Keller, 2015:176; Vicedo, 2017:1), many attachment theorists still focus on the instinctual biological drive and connection between mother and child (Vicedo, 2017:3). Literature notes that the internal attachment and exploratory system between mother and infant is activated when the infant seeks proximity in times of stress or anxiety (Mercer, 2015:383). Traditional attachment theory is based on the understanding that infants organise their behaviour in a way that they maintain an internal balance between their need for protection and comfort from the mother, and their need to explore the environment (Whipple et al., 2009:220).

The innate biological drive underlying attachment might be regarded as an inherent strength that could be emphasised during interventions to promote mother-infant attachment. However, a narrow focus on this inherent aspect of human nature might not explain the differences in attachment behaviours and the development of different attachment styles. Two participants highlighted the possible influence of socio-cultural factors in the development of attachment, in addition to the instinctual basis:

- "I think the guidelines in terms of how mothers … interact or respond to infants are sort of like a standard guideline but then different households you know, adapt to it as they see fit." Participant 52 (Coloured professional)
- "… we have a very diverse cultural group in South Africa, and so there's no one right way to do it. It's what you've been brought up with and what is going over ... [to the next generation]." Participant 32 (White professional)

Literature indicates that although some aspects of attachment are universal, there are also cultural variations in attachment practices (Arnett, 2016:219; Berk, 2013:432). For example, multiple caregiving arrangements as well as various degrees of holding a child are viewed as spoiling, mentioned by African participants. These shall be elaborated on in later themes.

John Bowlby (1969) proposed that human infants are born with built-in social signals such as crying, babbling and smiling that are intended to elicit a response from the caregiver and will ensure the survival of the infant (Berk, 2013:24; Holmes & Slade, 2018:6). Based on the caregiver's warm, sensitive response over time, a true affectionate mother-infant bond (attachment) develops (Berk, 2013:429). The mother participants voiced how the basic need to attach is displayed by the infant's crying, hungry or smiling, happy faces which drew a reciprocal response and led to furthering the bond and understanding between them.

The participants expressed the views that sensitive care during infancy is valued among all cultural groups. This aspect is discussed as the next sub-theme.

Sub-theme 1.2 Sensitive care is valued across cultures

The research findings indicate that the participants in the sample of mothers' place value on the aspect of sensitive care for an infant. The following quotes represent a general pattern.

- "It's just this feeling when I'm looking at her and I'm holding her. … I can feel there's a bond between us even as I'm looking at her, like the way she looks at me compared to others. It's like she knows this is mum." Participant 6 (Coloured mother)
- "You should talk to her calmly, she must feel a sense of calm and she must be aware that she is within a space where she can be calmed." Participant 10 (Sotho mother)
- "I think so, I think that's what most mothers would want is just to be a good mother and to love and to be kind. … Just giving them lots of love because that's all they need, you can't always provide them with material things but it's just lots of love, lots of patience, lots of stimulation." Participant 31 (Indian mother)
- "I think, for me, affirmation, I mean affection gives affirmation. So, when he clings, I hold him. I give him that sense of security." Participant 12 (Zulu mother)
- "Well from, like the way I grew up we had to be gentle with the child and just basically what my mom taught, with the rest of my children you have to be stern but not cruel." Participant 29 (Coloured mother)
- "We believe that if the baby cries, you don't leave the baby to cry. We pick our child up cause the baby is crying for a reason. We smother the baby, we comfort the baby. We strongly believe that the baby is not crying for no reason so if a visitor has come and the baby continues to cry then I feel that there's negative vibes ... Yes, and that's the reason we have a black dot on our babies and black beads so that if someone comes in with negative vibes, it's not cast on the baby ..." Participant 14 (Indian mother)

The participants in the sample of experts expressed the following views:

- "I would not want to define any group's behaviour, but I would assume that most cultures value parents being available, responsive and helpful towards their children." Participant 68 (Expert)
- A study was done in Khayelitsha in Cape Town. What was interesting was that those who were securely attached, culture did not really matter. Participant 66 (Expert)

The professional participants in the sample voiced their views on the importance of sensitive care in the following words:

- "Xhosa women have that nurturing ability … Xhosa culture is more about feeding the baby well, and holding your baby right rather than buying things but it depends on household to household." Participant 35 (Xhosa professional)
- "You know what, what I have realised is that in most of the cultures that I have come across and the ones that I have known, is that we are told to love, we are told to respect … in all the ages from the baby to the oldest persons." Participant 62 (Zulu professional)
- "It is considered very important for a coloured mom to bond with their babies from a young age. You need to spend time, play with and pick up your baby." Participant 33 (Coloured professional)
- "… most of the time you … you know, [the] strong bond that you create with the child, because if you're a mom you know how precious a child is." Participant 45 (Xhosa professional)
- "Black African mothers are well attuned with their babies. Maybe it has something to do with how much time they spend with their babies. There is also a lot of physical contact with their babies being on their backs." Participant 32 (White professional)
- "It's very important that with child raising you are there every step of the way and you create this bond so that the child can always trust you to a level where they don't feel that mummy is not around." Participant 55 (Sotho professional)

The above quotes indicate that this sub-theme reflects on sensitive parenting, which is of utmost importance when engaging in attachment parenting (Bernier et al., 2015:1853; Miller & Commons, 2010:1). Attachment parenting involves practices that decrease the infant's stress levels as quickly as possible, such as responsiveness to crying, touching, holding and co-sleeping (Bernier et al., 2015:1853; Miller & Commons, 2010:3). Bonding practices which keep the infant baby close to the mother and protected physically and psychologically may not just relieve hunger but also long-term illness (Kennedy et al.,

2014:288; Miller & Commons, 2010:3). Maternal sensitivity can be expressed in different forms. Certain cultures all over the world such as the Kung San, hold their babies at least 75% of the time in the first 20 weeks of life; if not by the mother then by another elder (Miller & Commons, 2010:3). Holding practices help to soothe a baby emotionally and physically and reduce crying and general stress levels of the baby and mother (Miller & Commons, 2010:3).

Maternal sensitivity is defined as the ability to perceive a child's signals accurately, and to be attuned by responding to such signals in a prompt and adequate way through play and everyday care of physical and emotional needs (Bohr et al., 2010:56). Sensitive mothering is considered paramount for a child's future development in classic and recent attachment theory and literature and has been researched in experimental studies spanning over 20 years of child development from early infancy (Bernier et al., 2015:683). Sensitive parenting focuses on the quality of early child caregiving and maternal sensitivity and has been proven to have an impact on all areas of functioning (Lefmann & Combs-Orme, 2013:641-642; Madigan, Atkinson, Laurin, & Benoit, 2013:672).

Literature strongly supports the idea that bonding and attachment have an impact on the baby's brain and social development (Jennings, 2011:104; Cozolino, 2010:179-180). Nature and nurture play a role in that the quality of nurture will determine the growth of the baby's brain and whether it will reach its' full potential (Jennings, 2011:136). Largely, the social interaction between the attachment figure (mother in this study) and baby determines the growth of the brain (Jennings, 2011:136). In this study, the importance of sensitive care became apparent across all represented cultures. Participants spoke of giving love in a kind and gentle fashion as a mutually beneficial and necessary process. Experts expressed their understanding of the meaning of gentle, loving care across all cultures, and professionals expressed how the ability to connect sensitively occurs naturally amongst African mothers. The attachment figure's emotional sensitivity is paramount to the healthy attachment and development of the baby and should be a focus in early child development programmes across all cultures (Miller & Commons, 2010:10-11).

As is clearly evident in this sub-theme and in research, sensitive parenting is of utmost importance in enhancing the attachment between mother and infant. In the next sub-theme, a lack of knowledge about the importance of attachment practices was considered a serious problem to be considered.

Sub-theme 1.3 Lack of knowledge about attachment

The expert and the professional participants raised the point that parents lack knowledge about attachment. The quotes below represent a general pattern on this sub-theme. The participants in the sample of experts expressed their viewpoints in the following manner:

- "… African cultures [are] … different to the West, where there is more education." Participant 67 (Expert)

- “In general, … priorities for parenting in African cultures are really under-developed in comparison to the West. I would like to say not, but I think it is a possibility.” Participant 66 (Expert)
- “Because sometimes they (mothers) think, I love my child and that’s care enough. And a child can’t read love ... Those would be bathing your child, dressing your child, making sure your child is warm enough when they go out, not leaving your child anywhere but with somebody that you know that you can trust and is responsible, making eye contact …” Participant 64 (Expert)
- “That is really what it is, it’s about the connectedness in the culture ... Exactly, it’s an inter-generational thing so what one would have expected is that with the access to information, the access to knowledge that people should have become ... better.” Participant 65 (Expert)
- “I don’t know enough about people’s understanding of attunement, or even whether they have a specific concept of what that is. We know what attunement is. It’s a very professional term.” Participant 63 (Expert)

The participants in the sample of professionals expressed their views on the lack of knowledge on attachment as follows:

- “To educate these moms about how important it is to have a bond; I think that is the most important thing to me. Because like I say it is all about the education, you know, if they know how important it is.” Participant 48 (White professional)
- “There needs to be work done on communication, positive discipline and a reward system ...” Participant 33 (Coloured professional)
- “So, their parents leave them there at the rural areas and when they come here to join the parents there is no, you find that they never had an actual relationship with their own parents ... (there) has always been somebody who will raise the child despite whatever circumstances happened. Whether the uncle or the aunt, or maternal or paternal grandmother.” Participant 40 (Sotho professional)
- “I think there’s an assumption that a mum will connect with her child. I think more the focus especially in those early stages, is on how to take care of the child especially dressing the umbilical cord, bathing and feeding and really just keeping the baby protected.” Participant 61 (Zulu professional)
- “I trained them to get the mothers together and they are still at the recruiting phase on this stage, but the whole training was to get the mother together to let them bond with the babies, the children. Give them educational skills, colour, numbers and things like that. And also, how to react to the child, play with the child, talk to the child because the people can’t communicate with

their children. And also, then we give them life skills at the end of the day." Participant 41 (White professional)

- "In my generation, I think we would do that because we are now informed but previously, I don't think the touching, the people knew that it would have an effect or one can still do that. But I think now the people are becoming more aware of the realities of this miraculous baby growing ..." Participant 55 (Sotho professional)

Even though attachment was considered innate and sensitive care was highly regarded, experts and professionals were of the view that mothers would not necessarily have sufficient knowledge on the importance of attachment and caregiving practices that would support healthy attachment. The professional experts highlighted that education and awareness on attachment are less well developed in South Africa in comparison to the West, where funding and programmes are more readily available (Bain, 2014:601). These participants indicated that people in the West are better informed of and educated in parenting skills and in applying attachment practices due to greater exposure and readily available professional programmes, which enhance the development of attachment parenting and skills.

The professional participants felt strongly that mothers in South Africa, across cultures, would benefit greatly from having an opportunity to have a basic understanding of attachment and the importance of bonding and creative play. The participants thought that mothers living in deprived settings need to acquire better skills and knowledge of parenting sensitively whilst facing socio-economic struggles.

Researchers have found that there is a need for more naturalistic, home-based programmes in South Africa, where knowledge is brought to those who are impoverished (Aspoas & Amod, 2014:588). Caregivers should be met on their terms, in order to make attachment-based education and awareness in the country more accessible (Aspoas & Amod, 2014:588). The funding required to implement attachment intervention programmes and professional availability for such programme implementation in South Africa is very limited, though the need is high (Bain, 2014:601; Cooper et al., 2009:2).

Many participants, however, were of the opinion that culture would have an influence on mother-infant attachment. The impact of cultural beliefs, values and norms as an important influence on attachment behaviours as voiced by the participants, is described in the following theme.

6.3.2 Theme 2: The influence of culture

This theme focuses on the influence of culture on attachment figures in terms of cultural norms and values acquired from past attachments or diffused when acculturating within a new culture as a result of urbanisation. Mother, professional and expert participants across

all represented cultures voiced their views on the effects of culture, historical attachments and acculturation on mother-infant attachment.

Sub-theme 2.1 Culture could influence attachment

A number of participants believed that culture has an influence on mother-infant attachment. Some mother participants explained that they would follow the ways in which they were raised within their cultures as they were the main carers in their child's life, and would want their culture to dominate in child rearing practices. Mother participants were therefore more influenced by their own family's cultural practices in which they had been raised, rather than their partner's side of the family. Their viewpoints represent a specific sub-theme rather than a general pattern.

- "I'm Zulu and my son is also raised under the same thing as I'm the parent." Participant 7 (Zulu mother)
- "I am Zulu, and my child is being raised as a Zulu." Participant 16 (Zulu mother)
- "I too am in the Xhosa culture. My husband belongs to the Rwandese culture. Then my children grew up here in South Africa, so most of the things that I followed when they were babies, it's from my own culture." Participant 9 (Xhosa mother)
- "But because we were raised by our mothers, they only know their own culture which they were brought up with which was Pedi. So, most of the cases I can say I was raised mostly with the knowledge and the wisdom of Pedi people." Participant 10 (Sotho mother)
- "My cultural group is like, Xhosa, and my child is being raised the Xhosa way, because of … I'm supposed to be with my mother and most of the way she does things is the way my child is going to be raised." Participant 18 (Xhosa mother)

Others indicated that the child will be raised according to the culture of the father as that is what was considered culturally correct. A professional participant and two African mother participants mentioned the following:

- "Maybe it differs, that is Xhosa and Zulu differs then because the child belongs to the paternal family, or the father. You know, they even take the surname and go stay there, if you are married also you know the child changes, if let us say you are married you are going to build a home and you will be, they would sometimes say that you are increasing their family or you know you are enlarging their family by you being there." Participant 45 (Xhosa professional)
- "I am Tswana (by birth) but they are Sotho as their father's Sotho but me and their father we are not together. We are not married ..." Participant 11 (Sotho mother)

- "… the grandmother from the father's side, she will take responsibility, as whatever you do you will have to take advice. ... They will tell you how to do things." Participant 8 (Zulu mother)

A participant who was an expert on mother-infant attachment expressed an opinion on the influence of culture in the following manner:

- "Sometimes the mother would not stay in the home of the spouse, she would move into the home of her mother or a great aunt for a period of time. Some cultures are very particular about a certain number of days whether it's 30 days or 60 days that there no visitors permitted into the house or beyond a certain level of relatedness. There might be something like the burying of the umbilical cord within the family home and having this as something very particular about that baby linked with the ancestors and linked with the family that went before generations." Participant 69 (Expert)

Participants in the sample of professionals voiced their opinions on the matter:

- " I think there is a lot of pressure for someone within my culture, because like I said, we are Westernised, we are exposed to a lot of pressured guidelines and ways things should be done but in our culture, well, so I'm thinking there is a lot of pressure around breastfeeding, formula feeding, there's a lot of pressure like around the sleeping and the sleep training and the crying it out methods, there's also … there's a lot of guidelines and I think it places a lot of … there's a lot of toys out there. I think in the African culture things are just done the way they've been done for all of time and I know there is that Westernised influence coming in, but still that is more … things aren't that complicated as in the Western cultures." Participant 42 (White professional)

- "... the Xhosa, Zulu moms find it very important that their children grow up with people of the same race and culture." Participant 33 (Coloured professional)

- "How parents bond with their children in Indian communities seems to be similar. … all Indian communities lived together; they have similar world views and similar cultural identities. Similarities across countries too; there might also be a South African culture." Participant 34 (Indian professional)

One professional social worker mentioned the effects of raising a child according to the practices of two different cultures:

- "I have found that it does affect the child, when they grow up in different cultures. It interferes, I have found with their attachments and their identities. In working with people who believe in ancestors, it is very important that children must connect with

previous ancestors through rituals, otherwise bad things will happen to the child." Participant 33 (Coloured professional)

The participants indicated how parenting practices are often based on what was learned in the home. For mothers, the association with culture is strong where Xhosa and Zulu mothers express the importance of their children growing up within their culture, if unmarried. However, when married, the influence of the father's culture becomes quite dominant, as mentioned by Xhosa and Sotho participants. The literature reports that there is a strong need to study children in their socio-cultural context (Vicedo, 2017:7). In the ecological systems theory, Urie Bronfenbrenner, an American psychologist, focused on the lack of research on contextual impacts on child development and emphasised the importance of how ecological contexts affect psychological growth, stating that one cannot only focus on the mind and internal factors affecting psychological growth, but must look at culture and its effects on development in external systems (Amoateng & Kalule-Sabiti, 2013:133). In this study, the focus was on socio-cultural impacts on attachment behaviours of mothers or caregivers. The researcher attempted to understand the effects of the context in which a child is raised. The effect of context and systems within the environment is evident, as cultural practices are generally passed on from the mother's culture (maternal family) to the child when outside of marriage, but from the father's culture (paternal family) to the child when married, as expressed by the participants.

Considering that many children are raised in single-parent homes, it is understandable that most often the child takes on the culture of the parent by whom she is being raised (Keller, 2015:178). Research has proven the prevalence of single-parent households to be high in South Africa, as the divorce rate is high leading to fathers having less of a cultural impact on their children (Aspoas & Amod, 2014:584). More children are being raised in step-families and other family configurations (as is mentioned by some of the participants) (Combs-Orme & Renkert, 2009:394). Research has shown that in the event of divorce or single parenting, it is still usually the mother who remains with the child (Combs-Orme & Renkert, 2009:396). Therefore, one would logically deduce that the culture of the mother and her family would prevail in such cases.

The significant effects of past attachments on parenting style and attachment behaviour where parents are likely to behave in certain ways, is discussed in the next sub-theme.

Sub-theme 2.2 The role of historical attachments

In this study, participants from all represented cultures pointed to the influence of historical attachments on parenting practices. It becomes clear that many parenting practices are learned from past attachments.

In the sample of experts, participants expressed the following viewpoints:

- “I can’t point to culture but rather to nurture. The way you were raised is the strongest predictor of how you will attach.” Participant 66 (Expert)
- “Because if there isn’t a great attachment between mom and granny, there won’t be a great attachment between granny and grandchild.” Participant 64 (Expert)

An Indian professional participant poignantly described the significance of historical attachments:

- “So that, so my mother nurtured me so that I could nurture my baby ... So that is, that is what goes on you know, it has been going on for generation upon generation and I really hope that’s something in our culture that never gets lost.” Participant 44 (Indian professional)

Mother participants voiced their views on this topic:

- “But as I said also it, then again, it comes back to how they were raised.” Participant 28 (Coloured mother)
- “With my children, normally I use what I know, what I have learned from my mother.” Participant 10 (Zulu mother)

One mother participant mentioned that, as her practices differed from those of her parents, her behaviours were criticised by her parents-in-law who had different views on raising a child.

- “And then with my husband, he was a month old when his mom and dad moved him to his own bedroom. So yes, that was a bit of a clash with his mom and dad. They keep saying you need to move him, and I know I should have because now I am sitting with the problem of moving him, but I really don’t mind him sleeping in my bedroom.” Participant 13 (Indian mother)

The above-mentioned views represent a general pattern indicating that historical attachments play a significant role across cultures. Throughout the literature, there is a reflection on how one is rooted (from birth) to behave in ways that have been learned. It is believed to be the same with attachment practices. Attachment practices are mostly understood as being inter-generational by researchers of attachment, in that much is learned from historical attachments and ingrained in a parent’s behaviour whether they are consciously aware or not (Lee et al., 2013:266; Velderman et al., 2006:266). Evolutionary theory specifically looks at the many complex interactions between person and environment, and how this impacts the individual over time (Sayre & Walker, 2014:967). The focus of attachment theory is the evolvement of specific aspects of complex human

behaviour, which is precisely the focus when analysing how historical attachments impact current attachments (Sayre & Walker, 2014:967).

Attachment cannot be understood in isolation, especially when focusing on intergenerational effects. The impact of various systems (such as the immediate and extended family) in the environment on the transmission of attachment, must be understood (Amoateng & Kalule-Sabiti, 2013:133; Chau-Ying Leu, 2008:18). These contextual factors will affect the behaviours of both parents and children and are significant in the intergenerational transmission of attachment.

Considering the still powerful impact of collective child rearing by extended families in South Africa, the impact of historical attachments must not be disregarded. The role of past generations in attachment is thus significant in South African cultures.

The Adult Attachment Interview (AAI) specifically analyses adult attachment patterns as a consequence of past attachments (Keller, 2015:177). In this interview, parents reflect on their attachment relationships in childhood and how these may have affected their development (Farnfield et al., 2010:319). Studies have shown that adult attachment patterns are correlated with infant patterns, but the results of these studies are, however inconclusive as to how the transmission of attachment patterns between generations specifically occurs (Keller, 2015:178). This transmission gap has been filled in therapeutic processes by reflective functioning and narrative conversational discourses (Keller, 2015:178).

Therefore, many attachment-based interventions and programmes focus on cognitive behavioural approaches geared towards 'reprogramming' parents to understand their specific attachment practices based on their past attachments (Berlin et al., 2013:81-82). These programmes re-interpret the childhood experiences of the mother in a way that will impact positively on the new interaction between the mother and infant (Lee et al., 2013:266). Inter-generational attachment practices can clearly affect current attachments in an infant's life, and therefore cannot be discounted.

Due to migration and urbanisation, many cultures of origin have become diffused. The discussion now moves on to the next sub-theme, namely the influence of acculturation, which appeared to impact parenting practices in the represented cultures.

Sub-theme 2.3: The role of acculturation

Acculturation involves a process where the beliefs and practices of one culture are abandoned and substituted by the beliefs and practices of a new culture (Garcia Coll & Magnuson, 2000:99; Mawani, 2001:18). Acculturation often occurs alongside migration and the factors which influence it, such as fluency in the official language, social resources, place of the child's birth, and age at migration (Mawani, 2001:18). Participants emphasised that acculturation plays a role in minimising the influence of cultural practices on attachment.

Some indicated that this was due to losing contact with their traditional cultural groups through urbanisation, whereas others indicated that it was due to being exposed to Western thinking on attachment.

Participants indicated that they lost contact with their cultural roots, and therefore did not abide by the cultural practices as strictly as they would have should they have remained in the families of origin. Change can happen over time as reflected by the chronosystem in the ecological systems theory of Bronfenbrenner (McGuckin et al., 2013:39). Many factors in a child's environment may affect development. Changes in the chronosystem as a result of social issues over time, such as oppression and inequality or technological changes may have an impact on culture. The concept of acculturation can be relevant in this regard.

One participant, a professional social worker, indicated:

- *"*Western culture has had an influence on African cultures, African cultures take on a bit of both Western and traditional, I would say" Participant 35 (Xhosa professional)

The participants in the sample of mothers voiced their experiences on acculturation in the following words:

- "Absolutely, actually to the point of rejecting it (culture). So, for example when a baby is crying with winds there will always be Indian medicines you know to help the mother with the baby and the modern moms will go no, my baby is not getting that. If it is not prescribed by the doctor it is not written anywhere, I have no evidence that it is going to work, so there is this lack of trust in terms of the old ways of doing things." Participant 26 (Indian mother)

- "So, for me it's fair enough, tell me what you want to do and make me understand the moral around it, and my mom couldn't. So, I was like, okay, fine, we're not doing it. So, whenever she can't explain clearly, I'm like, I know, let's leave it." Participant 12 (Zulu mother)

- "Remember I stay in the township. The circumstances are actually different from the rural areas. … I'm really not sure about that as I said before most of the things I did them myself and culturally they'll tell you about rituals that you're not supposed to do this or that. In my family, everything's different. That's how I was actually raised because we were not really that cultural if I compare my uncles and cousins in KZN. So, we moved away from 90% of the things done in the rural areas." Participant 7 (Zulu mother)

- "I would say my mom was a domestic worker, she would look at how the White people would actually raise their kids. She actually made us groom and raise our kids the same way ... that had an influence." Participant 8 (Zulu mother)

- "… if you had to probably interview my mom, she will be able to tell you more in-depth stuff about the Hindu culture. If she had to tell me I'd be like, I don't know what you're talking about." Participant 20 (Indian mother)

Two professional participants concluded with the following statements:

- "Rather than speaking about 'culture', I believe it is more useful to arrive at understandings of a person's personal-cultural orientation toward particular situations or events. … A multicultural identity is complex (incorporating a great many cultures at the same time). According to a multicultural perspective, scores of different culturally learned social roles compete, complement and co-operate with one another in each person. … Generally, I think parenting is more influenced by incidental than didactic learning. People often model their behaviours on what they observe others doing or experience themselves, so we can expect lots of talking to the baby, picking the baby up, playing with the baby." Participant 68 (Expert)

- "So, throughout all cultures I think it's a similar part, be it Xhosa, Zulu, Sotho, that they are beginning to change that the role of a woman is not kept into taking care of children. So, I wouldn't say there's a specific culture that's still very much concentrating on the old ways of doing things, the traditional way of doing things." Participant 51 (Xhosa professional)

Other participants indicated that they learned about attachment in a Westernised context, which affected their views of, and practices related to attachment.

The mothers in the sample expressed this view in the following quotes:

- "I mean, I think most of the things that I do, we learned from the pre-natal classes." Participant 12 (Zulu mother)

- "Yes, mostly because I am in the city and I am a working mom and I don't do what the grandparent did - my mother and all that. So, I practice my own, what I know, what I know from the internet. If the baby is in pain I Google." Participant 10 (Sotho mother)

- "I think young Indian moms don't value the advice from elders as much anymore, they rather depend on Mr Google himself or read books, or go to classes and such education." Participant 26 (Indian mother)

The participants who were professionals also expressed their opinions on the impact of modernisation on acculturation:

- "And I think that's also, this comes with modernisation that has taken place over the years, you know. It's become so Westernised... there's so much of mothers see to do much of reading and how it should be done." Participant 56 (Indian professional)

- *"*There is a lot of Westernisation across African cultures. Some newer practices such as if the child is crying, you must always attend to the child. In the olden days, more traditional methods were used." Participant 36 (Xhosa professional)

As indicated by mother participants, some expert participants mentioned that exposure to modern media and access to literature could also lead mothers to adopt a more Western perspective on attachment.

- "My culture seems very much influenced by attachment parenting which has permeated through the media where at the moment skin to skin contact is encouraged, where sensitive responding is encouraged, where there almost seems to be an over-emphasis on making use of external material things to be able to support attachment, and in a way it almost feels like there's something of a separation between drives and what is innate and making use of material external resources to support something ... umm it feels like something's been lost." Participant 69 (Expert)

- "… and then more sophisticated people who might have read up about child care, would know that talking to your baby and gaze are important." Participant 63 (Expert)

Acculturation is defined in the literature as either an individual or a group process where a particular culture comes into regular contact with another culture, leading to deviation from the norms of the original culture of the group or individual (Teske & Nelson, 2006:352). A generation is usually about 20 years in length and is formed by important events in a country, with an overlap between two generations leading to a cusp generation (Codrington, 2008:2). Changes between generations are therefore considered a generational change. The urban mother participants in the Xhosa, Sotho and Zulu cultures were often confused as to the differences between their culture and what they had learned. With time, their cultures seemed to have had less of an integral impact on their child-rearing practices. Some of these participants spoke of questioning child rearing ideas from their cultures, and needing to find some meaning rather than just blindly following ideas from the past. They therefore questioned and decided on which beliefs, cultures and values to adopt, as a consequence of generational change. Research has shown that certain values such as increased freedom for women, differences in the views of respect, and adapting the value that is placed on independence versus dependence to the new context, can be modified due to acculturation (Garcia Coll & Magnuson, 2000:99; Mawani, 2001:19).

Literature indicates that many aspects of traditional Sotho beliefs have become diffused by access to modern media and other aspects of modern life (Minde et al., 2006:555). The mentioned authors note that, conversely, some traditional values, however, continue to have an effect on present day black South Africans. Most of the mother participants in this

study explained that their particular cultures from their homelands had mixed in with Western cultural values and beliefs and had affected their views on their child rearing practices when living and working in urban areas.

The bond between primary and secondary attachment figures and the infant are most significant in the formation of the infant's secure base. The researcher now turns attention to the perceptions of the participants with regards to primary and secondary attachment figures.

6.3.3 Theme 3: Primary and secondary attachment figures

In the following section, it is shown how the mother holds a dominant role as the main figure of attachment across all represented cultures. The words of the participants emphasise how nurturing and taking physical care of the infant are mainly the mother's responsibility. The father and extended family also take on important roles, as expressed by participants and highlighted in the following sub-themes.

Sub-theme 3.1: The mother as primary attachment figure

The quotes below represent a general theme identified in the data. One participant in this group (Participant 17; Zulu mother) indicated that the mother would receive support from the extended family members, such as aunts or grandmothers, but is however considered most important as the attachment figure. The following views demonstrate this point further:

- "… we believe that the mum is responsible, that is your responsibility as a mom. From a coloured point of view, we believe it's mom's responsibility. Your mom will do all the spoiling, the babysitting if you need her to look after the kids but predominantly it's my child." Participant 5 (Coloured mother)
- "… the primary caregiver is always the mother; he's my baby he sleeps with me. If work takes me away, I know that he can sleep with my mom and be fine but he's still my child; when I come back, he will come back to me. He's not going to stay with his grandmother and I just see him whenever. His parents are still the primary caregivers." Participant 2 (White mother)
- "The mother is the person who takes care of the baby when the baby is born, and then an aunt will come help you until you feel strong enough. If your mother is alive, she comes to help you if you are Zulu." Participant 17 (Zulu mother)
- "… in the Afrikaans culture the family is important, but the mom is the main caregiver." Participant 32 (White professional)
- "In the Indian community, it is still the mother's role to look after the children." Participant 34 (Indian professional)

- "I know with the Indian culture, there's a very big expectation of how the mother should be in terms of a lot of … when I say expectations it's that, it's expected of the mother to be the one that plays the primary role in terms of tasks that have to be done." Participant 58 (Indian professional)

One mother participant indicated that, as she was a single mother, she had no option but to be the main caregiver. She mentioned:

- "Ok I'm mummy and daddy, and when I was pregnant I actually told myself that I have to play both roles. So meaning I must make sure he has a place to stay, I must make sure that he's fine when he's sick. … and unfortunately, I cannot allow my parents into my little space. I need assistance here and there but in most cases 90% of the things I do myself." Participant 7 (Zulu mother)

The issue of absent fathers was also mentioned by a professional social worker in the sample, as well as an expert on attachment:

- "... the other thing with us is we are not mentioning father's here. With us the big thing is that ... while this is what the mothers tell us. We don't know if it's true or not. But probably 99% of them (young mothers) say they don't know who the father is. The fathers do not play a role at all, at all, at all." Participant 48 (White professional)

- "I see modern black men are more involved but if we look at reality most children grow up in single parent homes." Participant 67 (Expert)

Most attachment-based research is focused on the role of the mother in the infant and child's life (Minde et al., 2006:544; Vicedo, 2017:1). Research on multi-caregiving environments has shown that most caregivers are women. However, the child always knows the centrality of her mother. As stated in the literature, Bowlby referred mostly to the individual role of the mother in the caregiving system as a monotropic one, and focused on the work of Harry Harlow, a British ethnologist, who studied rhesus monkeys and their need for nurturing from a steel monkey, and found that the mother had a unique role in the upbringing of her offspring (Keller, 2015:182). This view of the mother being the main and only important attachment figure has been critiqued in recent research on attachment, as a consequence of cross-cultural studies in non-Western cultures where a collectivist approach to child rearing is more common (Vicedo, 2017:10). In the South African context, it is estimated that approximately seven million children are growing up in single-parent families, mostly headed by the mother as opposed to 6.2 million who are being raised by both parents (Bojuwoye & Akpan, 2009).

Through the words of the participants it becomes clear that practices may be changing over time, with fathers becoming more involved in the general caregiving of the infant. The

varied perceptions towards the important role of the father as a provider and caregiver are expressed by participants in the next section.

Sub-theme 3.2: The role of the father

Throughout the interviews, the mother participants spoke of the mother taking on the main caregiving role, whilst the father is mostly expected to function as a provider and protector of the family. This theme is evident in the following quotes:

- "When the baby is a baby the father is not too involved in changing nappies or washing or feeding or getting up for the baby in the middle of the night." Participant 9 (Xhosa mother)

- "My husband, if he were to say I can see you're tired let me bath the kids, I think I would die and have a heart attack!! It would be awesome ..." Participant 4 (White mother)

- "Truly speaking I would say they would just have to be there for financial support. The child would want to bond with the mother." Participant 8 (Zulu mother)

- "It needs to be the mom, but like culturally the dad needs to provide for the child. That's what usually happens, you know. … If the couple is married they like, you know, he buys the food in the house and everything. He's like the bread winner and then the mom takes care of the children." Participant 18 (Xhosa mother)

- "A mother is more able to deal with feeding etcetera in the formative years. A mom's more in tune with the littlies, and dad kind of grows into it. I think the mother is seen as the pillar of the family, the father is the building around it. So, there's the protection, the strength, the masculinity. A father's love must never be underestimated, it is what gives children a safety net that they are protected" Participant 3 (White mother)

- "Men find it easier to be the provider and be there financially in infancy in most African cultures." Participant 35 (Xhosa professional)

- "And trying to do parent/infant work is that … what I'm experiencing at the moment is that the father has an expectation that the mother has to take care of the children ..." Participant 51 (Xhosa professional)

Some participants indicated that husbands and fathers came to adopt a more Westernised understanding of their role in the family and have become more involved with the care of the infant.

- "It's primarily mom's job but due to people becoming so westernised, it's becoming father's job too." Participant 14 (Indian mother)

- "The mother must look after the home. This is a general African thing. The African man is slowly becoming more westernised. Men are slowly westernising in African cultures. Today we have house husbands where men are more hands on at home." Participant 38 (Zulu professional)

- "I see modern black men are more involved …" Participant 66 (Expert)

- "He always plays with them, sometimes he carries them, he delivers them to crèche … he changes nappies." Participant 16 (Zulu mother)

It appears that, although some fathers would be more involved in the everyday care of the infants, they would not do so in front of their parents, who would expect them to act in accordance with family norms. Also, fathers would more likely engage in practical tasks, rather than practices that are seen to support attachment.

- "My husband would change nappies any time, you know, and he doesn't feel any … you know ... Of course, he gets the look every time he does it in front of his mother. So, there are certain things, even in your modern family, you just don't openly ask your husband to do in front of an audience. … There are things … you won't ask him to change a nappy in front of your father." Participant 12 (Zulu mother)

- "Westernisation is happening recognising that mothers are working. So, fathers are becoming more involved, men are still gravitating towards activity that are practical rather than bonding." Participant 34 (Indian professional)

Theorists have distinguished between paternal investment and paternal involvement (Combs-Orme & Renkert, 2009:394). Paternal investment refers to a father's behaviours that ensure survival of the family and himself by means of reproduction. Paternal involvement focuses on father-child interactions that promote child development (Combs-Orme & Renkert, 2009:394). Therefore, a father could be practically invested in his child but uninvolved in the day-to-day caregiving of his child (Combs-Orme & Renkert, 2009:396). The participants in this study expressed this fact by speaking of fathers as financial providers more than being as invested in the caregiving of their infants. Nurturing tasks of caregiving were not dominantly viewed by participants as the father's main task, however, the role of the father appears to be changing with time. As participants indicated, many mothers are now working and there is a need for fathers to become more involved in caregiving for their children.

Another theoretical view is that immediately after birth, attachment to the father could have a negative effect on the primary maternal attachment (Jennings, 2011:110). The belief is that there should be little interruption of the bonding and attachment practices of

bathing, rubbing and touch that lead to a connection between the mother and baby (Jennings, 2011:110).

In more recent research, the importance of fathers in a child's development has been confirmed, however, there is insufficient research on the quality of caregiving that fathers provide to infants (Berk, 2013:439; Combs-Orme & Renkert, 2009:395). Most social work research with regards to fathers has been limited to absent or abusive fathers and issues of child support (Combs-Orme & Renkert, 2009:394).

Other research has, however, shown that paternal involvement has increased over the last three decades and in proportion to the mother's involvement (Combs-Orme & Renkert, 2009:396; Smith et al., 2011:135). Fathers have been found to be more involved when their marital relationships are positive, and when their wives have positive relationships with their own fathers and with premature infants, first born infants or those with difficult temperaments (Combs-Orme & Renkert, 2009:396). In modern times, fathers are called on to be sensitive and nurturing towards their infant babies and take on an active role in caregiving (Smith et al., 2011:135).

Biological fathers are often absent, leading to a growing variety of men taking on the father role with children (Combs-Orme & Renkert, 2009:396). Non-biological fathers such as step-fathers, mother's boyfriends and grandfathers often step in to take on a father role. The results is that children perceive these men as their fathers when they do not reside with their biological fathers. Due to recent changes to the family concept, when considering fathers, one must therefore include those who live with their children, those who live without them, and those who are not biological fathers but who live with and care for infants (Combs-Orme & Renkert, 2009:394).

Thus, as is indicated by the participants, the role and type of father has changed over time. One needs to consider the type of family within which one is working as well as the effect of external systems when analysing the presence and role of the father in the family system. A father's support is, however, considered significant in providing the mother with the much needed social, emotional and financial support required to be a sensitive, attached parent (Jennings, 2011:110; Mingo & Easterbrooks, 2015:472).

Therefore, one can conclude that although the father takes on a secondary role in certain circumstances, he still plays an integral role in the attachment process (Smith et al., 2011:135).

The significant influence and involvement of the extended family in child rearing practices such as nurturing and day-to-day caregiving was a topic raised by the participants when they discussed the role of the extended family.

Sub-theme 3.3: The role of the extended family

All the professional participants voiced the importance of extended family members in all South African cultures. Black South African cultures are believed to rely more heavily on a collectivist child caring environment, viewing this approach as important for the well-being of the child. The participants stated that White South African cultures tend to rely more on the immediate nuclear family, although extended family do play an important role. The professionals considered that culture was becoming more significant as extended family bring in customs, traditions and general practices that are culturally underpinned.

The expert participants' views of the role of extended family networks across cultures are evident in the following quotes:

- "I think that there certainly are cultural norms and set terms of things like … I know in the black culture for example, immediately after a baby is born, the mother goes back to her own home for a month or possibly longer, and is looked after and supported and the father of the baby is allowed to visit, but the mother is really supported and looked after for a very long time." Participant 63 (Expert)

- "There are a lot of mothers who do not take care of their children themselves; they leave their children with grannies or aunts so contact with the biological mother of the child is often very limited. … White children grow up with parents. Grandparents are important caregivers in African cultures." Participant 67 (Expert)

- "… like a lot of the grandparents … they come and stay with the mother when the baby is born." Participant 65 (Expert)

The above views on extended family networks were generally supported by the professionals in the study and explained in the following quotes:

- "… in the Zulu culture, they take it from grandparents. … raising a child … involves extended families more." Participant 38 (Zulu professional)

- "Black African clients the majority of them are living in extended family. Look at how many grandparents take care of their children's children." Participant 34 (Indian professional)

- "In the African culture there is this thing, a child belongs to the whole family. Like for instance if somebody should just pass away now there would always be someone taking care of the baby. … there would always be somebody who will raise the child despite whatever circumstances happened." Participant 40 (Sotho professional)

- "Extended family plays a role, a huge role in the coloured culture … because it's always grandma, it's always aunt that takes care of the infant …" Participant 50 (Coloured professional)

- “In Indian culture … the child always has an attachment to some form of aunt and granny ...” Participant 56 (Indian professional)

The following participant, however, expressed a more negative view towards the extended family in certain cultures playing such a large role:

- “... this Ubuntu idea that the child belongs to the community is actually not always the best. Because if they take the responsibility away from the mother, that they will take care of the child. But the main person must bond with the child and supposedly have all this contact with all the love and security and day to day attachment to the child is not important … I think it is absolutely unnatural and now they must bond with the older generation, but they were supposed to bond with the mother. So that friendship relationship with the mother is also not there.” Participant 41 (White professional)

The views of the mother participants generally corresponded with the opinions stated above that highlighted the importance of the extended family, as is clear in the following quotes:

- “The mother is the person who takes care of the baby when the baby is born, and then an aunt will come help you until you feel strong enough. If your mother is alive, she comes to help you if you are Zulu.” Participant 17 (Zulu mother)

- “… with both babies because I was allowed (to do it how I want to) because I wasn’t married. Because when you are not married you have that freedom to do what you want to do. But now if I were to get pregnant because now I am married, there will be some sort of, no don’t go to your mother, go to husband’s mother.” Participant 10 (Sotho mother)

- “In raising babies, everyone, everyone gets involved; they are excited as if I was a new baby.” Participant 26 (Indian mother)

- “I think the thing that still holds true, is like I said earlier, when the maternal mom arrives or maternal aunt or someone to help you bond with your baby, and I think that is something I hope will never change in the Indian culture, because it does allow you time to really bond with your baby.” Participant 26 (Indian mother)

One participant indicated that the extended family would only get involved in the care of the infant if there was a crisis in the family:

- “It's only extended family if ever there's an emergency or something had happened in the family. Then only the extended family gets to take care of the child.” Participant 19 (Sotho mother)

As is indicated by Indian, Sotho, Coloured and Zulu participants, the role of the extended family is prevalent and plays a supportive role for the mothers in some represented cultures. It became clear that a child has a series of caregiver figures that play a nurturing role together, and this makes a great difference to the mother, as mentioned by Indian mother (Participant 26). Research has shown that multiple caregiving environments where extended family plays a significant role are highly beneficial for the infant, by widening the newborn's social circle, assisting the mother to continue her own work and still earn an income (Bowlby, 2007:307; Keller, 2015:183). Furthermore, it is considered positive for the infant to be embedded in complex social networks from birth onwards when living in rural, less developed areas (Keller, 2015:183). In cases where socio-economic problems are rife such as homelessness, poverty and maternal depression, mothers have been found to ask their families to take care of their children as a first resort (Daryn, Gelberg & Suchman, 2012:6).

Neuroscientists have found that emotional attachment experiences with other caregivers have a positive effect on the growth of the infant's developing brain (Bowlby, 2007:308). It is argued as important that infants and children learn to tolerate daily separations from their parents, since in the modern day, most mothers return back to work at an early stage of the child's development (Bowlby, 2007:308). As indicated by a Sotho professional (Participant 40), there will always be someone in the African culture to take care of a child should the mother be unavailable. In many African cultures, the infant is left with the grandmother from a very young age in order for the mother to work and add to the household income. Thus, extended family networks quickly become a significant form of social, psychological and practical support for the child (Chau-Ying Leu, 2008:18).

Collectivist child-rearing environments are common all over the world, and the initial view of the mother being the single factor of importance in a child's attachment is less dominant (Louw et al., 2014:14; Vicedo, 2017:2). A monotropic relationship between a single caregiver and baby is seen as the exception, and it has been argued that mankind would not have survived if only mothers had been caregivers of their children (Vicedo, 2017:2). Studies have found that in the Efe of Zaire, collectivist cultures where child rearing involves extended family members such as grandparents, aunts, uncles, the children have benefitted greatly from their support when mothers have been out working (Keller, 2015:182). Mothers benefitted by sharing the costs of child rearing and having time to fulfil domestic activities of hunting, gathering or working on the fields, rather than focusing only on child care. Amongst the Efe, newborns are passed between women who collectively hold, carry and take care of the infant (Keller, 2015:182). Babies in the Beng ethnic group from Ivory Coast are also taken care of by the line of women in the family – mother, grandmother, aunt and perhaps one or two other women in the family (Keller, 2015:182). Extended family child-rearing has also been found to lead to well-developed secure children who are more adaptable to different social networks (Keller, 2015:183). There are thus many necessary and important benefits to multiple caregiving arrangements that leave the child protected

and surrounded by more attachment figures, which the participants in this study support through their statements. The ecological systems theory emphasises the benefits of positive links between different microsystems for the developing child (Chau-Ying Leu, 2008:21; McGuckin et al., 2013:38).

It appears that in the involvement of the extended family in infant and child care, the grandmother played a prominent role. This aspect is discussed more specifically in the next sub-theme.

Sub-theme 3.4: Involvement of the grandmother

Across the Xhosa, Sotho and Zulu mother participants in this study, the grandmother (in most cases the mother of the mother) plays an integral role in the development of the infant child. Many of the mother participants in the represented cultures expressed the importance of their mothers in teaching them how to attach to their infants (feed, bath, massage and breastfeed their infants), as well as giving them emotional support to mother their infants.

The following quotes from the mother sample group illustrate this theme:

- "If you're married either your mother in law or biological mother moves in with you to help you with the first few months of the caring of the baby." Participant 8 (Zulu mother)

- "My understanding is that in Zulu, in Isizulu, your mother would come rather because she knows you better. You won't feel embarrassed at all with your mother." Participant 12 (Zulu mother)

- "If you don't have a mother, you are on your own. If you have a grandmother, she will take care of the baby." Participant 17 (Zulu mother)

The dominance of the grandmother is expressed by an Indian professional participant in the following words:

- "Raising the child from infant. You find that a lot of the grannies come aboard, and they would give the young mother advice in terms of how she should breastfeed, what she should eat while she's breastfeeding. You know, how she should bath the child, how she must hold the child correctly ..." Participant 58 (Indian professional)

Amongst Black African participants, the role of the maternal grandmother often superseded the role of the biological mother, where the infant baby was left with the grandmother as the main caregiver once the mother returned to work. Some participants indicated that the grandmother would be the primary caregiver of the infant:

- “It’s my mother because she’s the one who spends the most time with my babies ...” Participant 11 (Sotho mother)

- “… your child could be closer to the grandmother. In my case, my son has been raised by my mother. My baby calls granny mom instead of me who is his biological mother.” Participant 16 (Zulu mother)

- “It doesn’t matter how old you are. As long as your mom and dad are there, you’re the child. That also makes me feel like my mom has the final say on who should be called mom. … My grandmother is forcing my son to … call her ‘mom’ and then call me by my name. … the thing is that when the child grows up that child ends up calling the biological mother by their name and not knowing the difference between the mother and the grandmother.” Participant 19 (Sotho mother)

- “My mom has more influence over my kids than I do in terms of raising them, giving them values, even the respect for an elder comes from the grandmother.” Participant 8 (Zulu mother)

- “I think that with your black cultures they send the baby away to go and stay with the grandmothers where the mommy is not really the primary caregiver.” Participant 32 (White professional)

- “I think culture got an effect, the mere fact that most of our clients, and we work a lot with foster care and the typical granny care situations ... Culturally the child can just stay with the grandmother and I can go on with my life as long as I can supply them with some funds, then there is no attachment. And the easy way for the people to just send their children away to the mother and they go on and only have contact with these children like once a year, and that is fine.” Participant 41 (White professional)

- “He was raised by my granny and aunt. ... I only go home maybe twice a month and it’s very very hard for him. He complains a lot about it that maybe I don’t like him in a way, that he doesn’t understand the reason that I have to leave him, that I have to come here in Jo’burg.” Participant 24 (Zulu mother)

From the above quotes, it appears that there are two aspects of the grandmother’s involvement. The first one is where the grandmother supports the mother for optimal bonding with her baby, as indicated by Zulu and Indian participants. The second is where the grandmother becomes a substitute caregiver as indicated by Sotho and Zulu mother participants. As is evident in this study, the grandmother takes on a dominant role in the caregiving of the infant in most of the represented Black African cultures. Research studies

have found that in cultures all over the world, most particularly Black African cultures, the grandmother or mother-in-law of the new mother or mother to be, is a central figure (Berk, 2013:438; Blumberg, 2013:8; Mingo & Easterbrooks,2015:472).

As mentioned by the participants, the grandmother takes care of the infant in cases where the mother returns to work, or in cases of migration or the infant being orphaned. Grandmothers have a number of significant roles in that they help take care of the mother after birth and teach child rearing practices by virtue of their experience (Blumberg, 2013:8-9; Gray, 2015:310; Mingo & Easterbrooks, 2015:472). Research has found that African mothers in urban settings are more Westernised and learn child-rearing practices from clinics, mid-wives and places of work as well. In rural settings, grandmothers play an even larger role, with the baby sometimes being born in the grandmothers' home (Blumberg, 2013:9). Traditional customs are stronger in rural versus Westernised urban settings. The emotional support the grandmother provides before and after birth is considered integral to the mother coping and improving the quality of her parenting (Blumberg, 2013:8).

Through the interviews, it became evident that siblings as part of the extended family, also play an important role in supporting their mother and caregiving of the infant, in the represented Black African cultures. This vital contribution of the sibling to caregiving shall be discussed below.

Sub-theme 3.5: Involvement of older siblings

When discussing the importance of extended family, it is important to consider the role of siblings. Professional participants spoke of siblings in traditional African cultures often taking over the care of infants when parents return to work, particularly in the rural areas. The involvement of older siblings becomes apparent in the following quotes:

- "Siblings are made to do the playing and must also take good care by means of feeding and looking after baby when sick." Participant 38 (Zulu professional)
- "Siblings also help with child rearing like when parents feel overwhelmed." Participant 36 (Xhosa professional)
- "… it depends on the relationship and at that point, maybe the circumstances. It's easy for us to leave a kid with siblings before we can go out and find them a proper nanny. ... If I want to go to shops or want to go out and there's a twelve-year old at home or a fifteen-year old, it feels comfortable to leave the baby with that person." Participant 49 (Xhosa professional)
- "It becomes a shared role in the house, if the mother is not there and is busy with something then the sibling is there to play with baby or look after the baby or ensure that the baby doesn't harm him or herself." Participant 40 (Sotho professional)

- “If the siblings are older yes they do play a role ... They start at about nine years ... So, they feel that they need to be able to also change and feed the baby. … it is very common, even my professional friends do it.” Participant 39 (Zulu professional)

- “So, siblings become attachment figures as well. … They are expected to assist a lot, and take responsibility, especially if parents are working.” Participant 38 (Zulu professional)

- “I think especially with girls, by the time they 12 the mom backs off and then let you know the children take care of each other. … Yes (even if the baby is 6 to 12 months old).” Participant 29 (Coloured mother)

- “It depends on how old your siblings are so if maybe your sister is younger than you or under with your age, you can try to teach her how to take care of your child, even at 10 years.” Participant 15 (Xhosa mother)

A participant indicated that even the mother’s siblings, at a young age of 10 years, could be actively involved in infant care:

- “So, if maybe your sister is younger than you or under your age. You can try to teach them how to take care of your child. … Even 10 years (old).” Participant 11 (Sotho mother)

It is therefore important to consider the effect of the sibling’s role on the attachment of the infant with the mother. As indicated by participants in the above-mentioned quotes, siblings take on a significant role in child caregiving from a young age and reside within the home, thus affecting attachment relationships. Researchers have proven that first born maternal attachment security decreased with the advent of a new sibling, which was more common for first borns between two to five years, than those under 24 months (Farnfield et al, 2010: 319; Kennedy et al., 2014:287). Research has found that children who are securely attached are also able to develop more stable, meaningful relationships with siblings and peers (Kennedy et al., 2014:287). It may be argued that with older siblings taking on such a caregiving role, infants might demonstrate a more secure style of attachment to these siblings.

In multiple caregiving societies, siblings are found to play a significant role in child rearing practices (Arnett, 2016:175; Keller, 2015:182). With the socio-economic pressures that many South African homes face, most mothers are required to work and become providers as well as to be mothers to small babies. In such situations, siblings play an important role offering physical support by sharing in the caregiving of the infant. As siblings reside in the family home, they are usually the first and most economical resource for caregiving support (Arnett, 2016:175).

Research has been conducted on mother-child interactions between siblings and on the importance of sibling attachments, moving away from focusing only on the mother-child

dyad (Kennedy et al., 2014:287). It has been found that when analysing the formation of attachment styles, it is better not to solely focus on a unilateral process from caregiver to child but to recognise that siblings play a role in sibling attachment discordance, as a result of naturally occurring triadic interactions in the home (Kennedy et al., 2014:287). Based on the statements on siblings by the participants in this study, such research findings are relevant to the South African context.

Wider social networks, beyond the siblings, were also voiced as playing an important role in terms of social support for mothers:

- "I've had a lot of help from my mother, from the domestic helper who I've grown up with and I've known for 30 odd years." Participant 3 (White mother)
- "Yes, … it could be any elderly woman. Or it could be my mother or for instance someone who's living in another place where there are no parents. They don't live with their parents. Any elderly woman can take over." Participant 9 (Xhosa mother)

Crittenden's Dynamic Maturational Model (DMM) (1992) places much emphasis on the importance of context in the formation of a child's bonds (Kennedy et al., 2014:288). Siblings and significant others in the wider social network play important roles in caregiving. Research has found that variance in attachment can be partially explained by interactions with other family members who play a prominent role, such as siblings. However, research on caregiving by siblings has been limited to the impact of sibling variables such as birth order, gender and birth spacing (Arnett, 2016:223; Kennedy et al., 2014:287). Further research needs to be conducted on sibling attachment and its impacts on the mother-infant dyad, because siblings clearly play an important role in family attachment patterns and affect these patterns (Kennedy et al., 2014:287).
Sensitive care is a dominant concept applied in attachment literature. It is important to consider sensitive care as being expressed differently across various cultures. The researcher reflects on this important theme in the following section.

6.3.4 Theme 4: The concept of sensitive care

In this theme, the researcher presents the participants' perceptions on the concept of sensitive care. The prevailing dominance of the physical needs of the infant, according to the participants, was apparent. The emotional needs were considered important but mentioned specifically by a more limited number of participants. These findings were demonstrated by the views of the participants in the following sub-themes.

Sub-theme 4.1: Attending to the infant's physical needs

Some of the mother participants living in rural areas spoke of prioritising the physical needs of the baby as a first concern. This aspect was more frequently expressed as a priority by participants in Black African cultures: the baby should be well fed, clean and healthy. It was

stressed by a number of participants that a plate of food and a bed to sleep on were considered most important. This sub-theme was reflected on by the following participants:

- "They have to learn to work on the bonding and play and learn how to relate to a child. For the Zulus, raising a child is more practical than emotional …" Participant 38 (Zulu professional)

- "You play if you can sometimes, but the physical needs of the baby are more important. For the baby to be well fed is more important." Participant 16 (Zulu mother)

- "So good care … with them, good care is like I'm giving you the money to take good care of my child, good care is not about I'm giving you love, I'm giving you attention." Participant 28 (Coloured mother)

- *"*I think for most mothers it's just about doing your daily duties as a parent you know, because the child is there so child needs to be fed, changed and all of those things. I doubt that there is a certain perspective of how they feel they need to bond. For them doing those things it is a bond you know." Participant 39 (Zulu professional)

- "Attunement is different in black cultures (in which) more physical than emotional needs are prioritised. In Black cultures the material is more important than emotional." Participant 67 (Expert)

- "In SA, the physical side is there but the emotional bonding between a mom and her child is not … One needs to know how to do that and why it is important, cause later in life there might be emotional scarring and they don't know why." Participant 32 (White professional)

- "And there's a belief that you feed the baby, you put the baby to sleep. You don't focus on the babies because your chores are still there and other things what needs to be done. So the more you spend time with your baby, the more things are not done in the house ..." Participant 30 (Xhosa mother)

It has been found during implementation of attachment programmes in South Africa that the physical needs of the infant are prioritised over emotional needs (Bain, 2014:594). The participants' responses indicate that socio-cultural norms could affect the conceptualisation of sensitive care. However, research has confirmed that mothers struggling with poverty, homelessness, HIV and maternal deprivation in South Africa find it difficult to focus on the emotional needs of the child and on sensitive parenting. These mothers focus primarily on the physical needs of the baby due to their circumstances (Daryn et al., 2012:2). Such social issues lead to higher levels

of psychosocial stress spurring maternal depression, which lends itself to lower maternal sensitivity and less of a focus on the emotional needs of the infant (Bain, 2014:592; Cooper et al., 2009:2). A focus on physical as opposed to emotional needs is also highlighted in other studies, such as with Kenyan Gusii mothers who focus first on their children's physical survival (Vicedo, 2017:10). It becomes clear that mothers have diverse priorities with regards to child rearing depending on their socio-economic conditions and cultural traditions affecting which needs of the baby are prioritised.

Adverse circumstances in a developing country can have an impact on maternal quality of care, and can obstruct attachment between the caregiver and child (Bain, 2014:593). As mentioned by the above participants from all three samples in this study, conceptualisation of taking good care of a baby also leads to good caregiving being perceived as a practical responsibility of feeding, clothing and taking care of a child's health. Both are significant themes to be considered for an early intervention programme in South Africa, where adverse living circumstances are common.

Although the above-mentioned sub-theme related more to a focus on the physical needs of the infant, the emotional needs of the infant were also expressed as a priority by some participants.

Sub-theme 4.2: Attending to the emotional needs of infants

Attending to the emotional needs of the infant, while taking care of physical needs, was voiced as important by a limited number of participants, as illustrated in the following quotes:

- "Good caring does not end with food and clothes. Both physical and emotional needs are important in the Xhosa culture." Participant 36 (Xhosa professional)
- "… affection gives affirmation. So when he clings, I hold him. I give him that sense of security." Participant 10 (Sotho mother)
- "When you bath the baby, we believe that for the first month you have to put the baby on your lap, and you sit and you literally bath the baby that way. It's a way of massaging the baby." Participant 14 (Indian mother)

Professional participants mentioned that in their experience, emotional care of infants does not receive sufficient attention. The following quotes indicate the need for a focus on the emotional needs of the infant.

- "Yes, in terms of understanding of attachment, in terms of responding emotionally, because when you respond, remember when the child is crying your response is of a concern that probably they need a nappy change. So you get frustrated when you

check the nappy, the nappy is fine, the child is full you know. They don't need anything, so you end up as a parent been frustrated that you don't know what this child wants. So I think emotionally most we are lacking." Participant 39 (Zulu professional)

- "A lot of the emotional attachment gets lost. I have seen with a lot of my friends who have had babies that they don't always know how to deal with the emotional ... sometimes it gets spilt over, some people feel stupid talking to their babies." Participant 32 (White professional)

Much of the research on attachment conducted in South Africa has been on the effects of extreme poverty on the quality of attachment and attachment behaviours. Such adverse conditions need to be studied in order to address this theme, and the need to learn to focus on sensitive parenting and emotional needs and not only the immediate physical needs of the baby (Cooper et al., 2009:2; Daryn et al., 2012:2; Minde et al., 2006:556).

A general pattern observed in the responses of the participants, were that the emotional needs of the infant were voiced as important by a limited number of participants. However, as indicated in the previous sub-theme, taking good care seemed to be rated according to keeping the baby clean, well fed and healthy in most Black African cultures. White and Indian cultures seemed to focus more on the holistic needs of the baby, including emotional and sensitive parenting.

A prompt response to infant cues was considered important by participants across most of the cultures represented in the study, as is illustrated in the following sub-theme.

Sub-theme 4.3: Responding to infant cues

Participants voiced the importance of responding to infant cues indicating that they have needs that must be attended to. This opinion was acknowledged by the participants in the mother and professional sample.

The following quotes illustrate the importance of responding to infant cues:

- "We do feel there must be an emotional and spiritual bond with the baby so picking the baby when they cry, holding them, touching them when they have a problem. We are very much there with the babies, we want to be there and we don't let them just cry, we pick them up. It is very important for us to have that bond with the babies." Participant 32 (White professional)

- "… important when baby cries and maybe not feeling well and needs your attention. And so, even though you are busy, the baby will want (your attention)." Participant 24 (Zulu mother)

- “You must be attentive, you must listen. I do respond, I talk back... but never do baby talk ...” Participant 5 (Coloured mother)

Although the above quotes indicate awareness of the importance of responding to infant cues, other participants noted that mothers do not respond sufficiently to infant cues.

- “The negatives might be that children should be seen and not heard when adults are having their conversation. Children should then occupy themselves elsewhere which is a barrier to bonding.” Participant 32 (White professional)

- “But you need to give attention to that clinging (by the infant), which sometimes don’t happen in the Coloured community.” Participant 28 (Coloured mother)

It became clear that a lack of responding to infant cues was interpreted as an attempt to avoid the development of excessive dependence in the infants. Therefore, more participants believed in letting the baby cry. Some participants believed that infants should learn to be independent, as mentioned below:

- “We actually don’t really have a problem with letting the baby cry and then they keep quiet by themselves. Then later on they learn to be more independent. That’s why people leave them.” Participant 9 (Xhosa mother)

- “… they don't believe in that, that when the baby wants to be picked up. They want the baby to learn to figure out everything by itself, in our culture.” Participant 18 (Xhosa mother)

- “… because sometimes they cry, like I know with my baby she cried because she cannot sit, probably she is just uncomfortable, but she has to figure out how to move her body so that she comes back to her senses, it is something I cannot do for her.” Participant 10 (Sotho Mother)

- “You must also leave the baby. The baby needs to learn to sit, wait, not give it your full attention all the time.” Participant 17 (Zulu mother)

- “Xhosa culture expects the child to encourage walking, and move forward in terms of the baby’s independence.” Participant 36 (Xhosa professional)

- “They must be independent from a small young age whereas I feel that we are there, we sometimes cotton our children a little bit too much.” Participant 32 (White professional)

- “I believe independence is definitely encouraged, I mean a child should be able to take care of themselves and if they are big enough one day so you’ll teach them from a very, very young age although you’re always there, having an eye over them,

making sure things are right, but definitely they should be able to do things for themselves." Participant 59 (Coloured professional)

- "And I know at toddler age it's where most of the independent behaviour starts." Participant 53 (Sotho professional)

As literature states, the formation of a reciprocal relationship between mother and infant in the formation of attachment occurs between eighteen months to two years, is significant for the cognitive, social and emotional development of the infant (Sigelman & Rider, 2009:412). The above-mentioned beliefs as stated by Xhosa, Sotho, Zulu, Coloured and White participants therefore prevent a prompt, sensitive response to infant cues that is seen as important in the development of secure mother-infant attachment. Between the ages of six and 24 months, the child begins to understand factors that influence caregivers' coming and going, leading to negotiations to alter the goals of the caregiver rather than just clinging to her (Berk, 2013:429; Keller, 2015:179; Louw & Louw, 2014:133-134). It is therefore relevant to discuss the importance of sensitive care in an early intervention programme as it is during this period of time that an attachment is formed. Further research has concluded that infants left distressed due to the fear of over-indulgence result in experiencing irreversible effects on their brain development, increasing the likelihood of severe problems later on in their life (Miller & Commons, 2010:1). However, attachment parenting involving feeding and soothing on demand is not always a practical reality for many mothers in the South African context when there is less time, energy and resources for extra attention to be placed on the infant (Aspoas & Amod, 2014:583). The above-mentioned facts motivate the importance of highlighting sensitive care and prompt responses in early intervention programmes, despite cultural beliefs.

One participant, being an expert on mother-infant attachment, was of the opinion that the expectations of mothers for their infants to learn to be independent were often age-inappropriate:

- "There is a developmentally inappropriate expectation of independence for young children in the African cultures … In my experience (of assessment and therapy for children and supervision of social workers) we did see a strong movement that children were expected to be independent at a young age - not the same in Anglo-Saxon or Afrikaans cultures. In African attachment, independence is rewarded, and dependence is not rewarded. … similar in coloured cultures as well. I think that this is often not developmentally appropriate." Participant 66 (Expert)

One professional participant mentioned that in modern urban life, infants become more independent from their mothers or primary caregivers, as they attend day-care centres.

- "I think in the first few years there's a lot of dependency, I think as I said now, where children are now more often than not going to day care and crèche facilities and not

really being reared by grannies at home. There is more independence, and because mum is working as well, there's more emphasis on the faster I can teach the child to be able to do things by themselves ... So as compared to previously where it wasn't like that. It was more like mom has to do everything. The traditional Indian mother, like my mother for example." Participant 58 (Indian professional)

Other Indian participants indicated that the dependence on the mother, as described above, was still relevant. They believed that in their culture, infants are encouraged to be more dependent.

- "I think a dependence and … especially with Indian boys, like little boys, very sort of smothered by their mothers." Participant 31 (Indian mother)

- "Many Indian communities … the children are less encouraged to explore the world. Anxious attachment can then be perceived as a child who is well attached and there is a dependence on their parents." Participant 34 (Indian professional)

- "Yes, I wouldn't speak just for myself but I think from what I observe in my community there is an assumption that you are a good mom if your baby is clinging to you. I don't see that as healthy attachment myself but there is this idea that you are a wonderful mom if you baby just needs you all the time. And that seems to be a cultural norm you know, like a mom actually takes pride in the fact that her baby doesn't want to go to strangers and other people and sees her as the home base for comfort and love and care." Participant 44 (Indian professional)

- "You know what, I think actually Indian mothers, especially with their sons, they like that dependency because it's that feeling of you know, I feel, I'm needed ..." Participant 57 (Indian professional)

As indicated above, most of the Indian participants spoke of dependence between mother and child being encouraged by their culture. A sensitive response to infant cues would thus be highly valued in the Indian culture, as indicated by the findings in this study. Independent versus dependent behaviours are prioritised differently in different cultures (Keller, 2015:181). Studies in the United States and Europe have found that some mothers favour independent behaviours over dependent behaviours (Mckenna, 2009:17; Vicedo, 2017:10). In studies conducted amongst Latin American immigrants in Canada, Latin American mothers found Canadian mothers to put too much of a focus on independence by having children sleep on their own from birth, attend day care too early, and be encouraged to feed and dress themselves earlier in life (Mawani, 2001:11). Latin American parents report teaching their children to be more dependent on them, alongside the value of the inter-dependence of family and community members (Mawani, 2001:11). German parents have been found to encourage independence and less emotionally expressive behaviour. In the

Japanese culture, mothers are kept very close to their babies and dependence and less emotionally expressive behaviour is also encouraged (Berk, 2013:416; Mckenna, 2009:18).

It is important to consider the individual path of each child and their developmental stage, rather than imposing parental and societal expectations on them too early in life (Mawani, 2001:11). Attachment parenting generally places more of an emphasis on fostering a dependence, particularly in the initial stages of life where the infant needs to feel loved, protected and safe, while she has few internal resources to do much for herself (Miller & Commons, 2010:2). Therefore, as indicated by participants in this study, the importance placed on independent versus dependent behaviours is vastly different in various cultures. There was a notable difference in perceptions of the participants on how to respond to infant attachment cues. One must take such differences into consideration when designing a culturally diverse early intervention programme in South Africa.

The researcher now turns attention to various parenting practices (some culturally adapted and learned from past generations) that affect attachment behaviours. Breastfeeding was mentioned as a common and important practice by all the represented cultures in this study, and will be the first parenting practice discussed as a sub-theme in the next section.

6.3.5 Theme 5: Parenting practices that might affect attachment behaviours

A number of parenting practices such as breastfeeding, co-sleeping, carrying the baby on the back, attention, face-to-face interaction, mother-infant play and discipline all have a strong impact on attachment behaviours. The participants in this study discuss their different perceptions and cultural views on these parenting practices, and their effects on attachment behaviours are then discussed.

Sub-theme 5.1: Breastfeeding as a bonding practice

Breastfeeding was often mentioned by the professionals and mother participants across Coloured, Indian, Xhosa, Sotho and Zulu cultures as being an integral bonding practice between mother and infant, more especially in rural areas. Breastfeeding was generally mentioned as an important attachment practice that soothes the baby.

- “Yes, I have been breastfeeding; to me it was very important in terms of the attachment and the bonding and the security ...” Participant 27 (Coloured mother)

- “You know (breastfeeding) as one form of attachment of your body to your baby, so I think Indian moms or grandmothers will cook particular types of foods like you know to produce more milk. So, it is actually quite difficult because if you cannot breastfeed there is a lot of guilt that comes with it and then you feel like, gosh can I actually do this, this is not going the way I

planned for it to go, so those kinds of things. So, there is a lot of hype around breastfeeding being best for baby." Participant 44 (Indian professional)

- "There's a lot of affection that comes to me with breastfeeding my child. I haven't done it any other way, so I wouldn't know ..." Participant 5 (Coloured mother)

- "For me, I don't know if it relates too much, but for me there's a lot of pressure with breastfeeding. I don't know if it is culturally specific, but like personally I struggled with breastfeeding and I always hated it, but I pushed through because I have to, because my culture told me it was the best thing to do." Participant 42 (White professional)

- "Also, maybe breastfeeding, because to some extent that also adds to the attachment ... and the bonding between mother and baby." Participant 52 (Coloured professional)

- "Our fore-mothers would discourage this culture, this new culture of bottle-feeding and introducing hard food eating and stuff like that, they would recommend breastfeeding. And I think that creates, that allows or affords mothers to have that healthy bonding ..." Participant 55 (Sotho professional)

One participant mentioned that breastfeeding in previous generations was more related to economic than attachment reasons:

- "Breastfeeding is very good for the child. Economical for the family. In olden days, like in the villages, people were poor, so, it was an easiest way to, it was the best and easier to breast feed." Participant 9 (Xhosa mother)

Some participants indicated that the modern lifestyles in urban areas or socio-economic conditions posed challenges for mothers to breastfeed their babies.

- "Breastfeeding, I think, is important … Yes, it's more of a must, but here in the urban it's like, you can give her the powder milk, because you have to go back to work." Participant 23 (Xhosa mother)

- "I think that some people have to go off to work very early on. Like almost a few weeks after their baby is born. Their culture, their traditional culture, might expect that the baby stays very close by on the mother's back, been fed on demand and that would be even for the first two years. Reality demands, that same person from that same culture returns to work and can't follow tradition." Participant 63 (Expert)

There are many documented benefits of breastfeeding for both the mother and baby. They range from building the baby's immune system to helping the mother's uterus to return to its previous size, and to the release of hormones (oxytocin and prolactin) during breastfeeding (Jennings, 2011:108). Breastfeeding prevents further conception as prolactin is released which inhibits conception (Jennings, 2011:108). Breastfeeding promotes the attachment process and helps the mother to become protective of her baby. One of the practical benefits of breastfeeding is that it is less time consuming and expensive than bottle feeding. Psychologically, breastfeeding requires the physical presence of the mother and facilitates the attachment process (Jennings, 2011:108). Apart from the physical benefits of breastfeeding, it has been found to play a critical role in early brain development and general healthy child development (Mawani, 2001:31; Mckenna, 2009:49). Breastfeeding has also been found to lead to a decrease in Sudden Infant Death Syndrome, as a result of the increased activity and attentiveness towards the infant during the process of breastfeeding (Mawani, 2001:31).

Breastfeeding is therefore considered an important, positive practice by the participants in the represented cultures. It leads to nurturing an infant by responding to her attachment behaviours. As voiced by the participants, the mother is generally perceived to be connected to her infant's needs, soothing her baby and responding sensitively to her infant whilst breastfeeding.

Co-sleeping, also perceived as a common parenting practice which enhances attachment behaviours, was mentioned by participants from Black, Indian and White cultures, and is discussed in the next sub-theme.

Sub-theme 5.2: Co-sleeping

The Xhosa, Sotho, Zulu, White and Indian mother participants stated that, in most cases, the infant sleeps in the same bed as the mother. The White mothers practiced co-sleeping in the very beginning for a period of time. However, they moved the baby to a separate room and sleeping space at an earlier age. All the mother participants reported that there are far more opportunities for bonding and intimacy when their infant sleeps with them, and often expressed emotional difficulties in detaching from the infant and having her sleep in her own bed. For some of the Black mothers living in rural areas, socio-economic constraints were also a reason for the baby sleeping in the same bed. A separate room, bed or cot/pram was not a conceivable and realistic option for them based on the socio-economic difficulties with which they struggle. The following quotes (from the different samples) illustrate this theme:

- "I take care of the baby, but when they are small, we are sleeping in one bed." Participant 21 (Sotho mother)

- “When we are at home we sleep on the floor, my baby always slept with me as the mother. We never have such fancy things as prams, cots and beds.” Participant 17 (Zulu mother)

- “Okay the norm is Indian babies will sleep in the bed with their parents.” Participant 26 (Indian mother)

- “African moms sleep in their bed with their baby and their husband. White moms use cots for their baby.” Participant 35 (Xhosa professional)

- “Yes, we sleep in the same bed from the day the baby is born until, my son is now 4 but he still shares the bed.” Participant 45 (Xhosa professional)

- “Mothers do sleep with their kids up until they are older. We don’t take our babies … we don’t separate with our babies, respective of their age. I can sleep with my baby until the age of fourteen (months).” Participant 46 (Xhosa professional)

One mother participant indicated that, although the baby did not sleep in the bed with the parents, he slept in the same room with them.

- “When he was first born, he was in a ‘Moses’ basket in our bedroom and he stayed in there until the first year. … He has been in the same room as me the first 2 years. He was in a ‘Moses’ basket next to my bed, and he was then in a cot.” Participant 3 (White mother)

Research has demonstrated that in collectivist child rearing, infants and children often sleep with their mothers or caregivers for long periods of time (Arnett, 2016:137; Mckenna, 2009:49; Miller & Commons, 2010:2). This fact was also evident from the participants in this study who expressed the physical and emotional benefits of having their babies sleep with them. Co-sleeping allows for easier breastfeeding practices and has proven to reduce Sudden Infant Death Syndrome (SIDS), as the infant is said to sleep best in a natural environment with the mother (Bernier et al., 2014:683; Miller & Commons, 2010:3). Cross-cultural studies have shown that the mother’s natural breathing helps the infant to regulate her own breathing (Miller & Commons, 2010:3).

As mentioned by Jennings (2011:105), there is no evidence to prove that co-sleeping is negative for the mother or infant. Research has confirmed that co-sleeping sustains life and gives soothing comfort to the baby, as the baby has limited resources to cope with separation from the caregiver in the first months of life

(Arnett, 2016:137; Jennings, 2011:105). Professionals sometimes advise that the baby be put down more often in order to protect the mother and not over-indulge the baby, but it is not necessarily the best nor the most stress-relieving practice, as has been documented in research (Jennings, 2011:105).

As mentioned by the participants, the practice of co-sleeping has many benefits on a physical, practical and emotional level for both the infant and mother, and is relatively widespread amongst most South African cultures. Carrying the baby is a widely practiced behaviour in South Africa. This practice is mentioned by many participants, as will be described in the following sub-theme.

Sub-theme 5.3: Carrying the baby on the mother's back

African Zulu, Xhosa and Sotho participants reported they would often carry the baby on their backs as a form of positive bonding and connecting to their babies. These mother participants expressed that carrying your baby on your back is a common practice in most other African cultures, and is considered a normal practice serving both emotional, practical and safety needs of the mother and baby. It was generally explained that mothers would still manage bonding with their baby whilst fulfilling their domestic tasks of cooking and cleaning most particularly in more impoverished rural environments. The following quotes demonstrate the importance of carrying practices for the participants:

- "I carry my baby on my back when I go to the malls, it is much easier." Participant 10 (Sotho mother)

- "I use a towel to carry the baby on my back while I do laundry and cooking." Participant 17 (Zulu mother)

- "I put them on my back when they are crying, when they want to sleep." Participant 21 (Sotho mother)

- "… there was a lot of touch involved, remember I had a sling. I put them in a sling and move around all the time." Participant 8 (Zulu mother)

- "… they do carry babies on their backs. When they have to do chores in the house or when they're travelling long distances." Participant 19 (Sotho mother)

- "But we find that it's easier to carry the baby with all the chores that a woman has to do. So, just to put them on the back, it's an easier way to sooth them." Participant 9 (Xhosa mother)

- “I love carrying my baby on the back because it soothes the baby. The baby most of the time, five minutes on the back, the baby falls asleep.” Participant 54 (Sotho professional)

- “The reason babies are put on a mother’s back in black cultures is for bonding and physical touch.” Participant 33 (Coloured professional)

- “Yes, yes in fact it is one of the things that you are taught as a new mother that you need to put your baby on your back and then there are other duties.” Participant 39 (Zulu professional)

- “… you will see that when you go into your rural areas or townships they will carry their babies on their backs or a friend will carry the baby.” Participant 32 (White professional)

- “I think the Botswana people do that as well, there is Zulu women they do that as well, the Xhosa women do that as well, they carry their babies at the back because most of the time you have to work and the back is the safest place to carry the child.” Participant 40 (Sotho professional)

- “We definitely carry the baby on the back only, we don’t just use a pram or what, we will put the baby on our back.” Participant 59 (Coloured professional)

- “With the Xhosa culture, we put our babies at the back and tie them with, you know, a towel or something and that brings a bond between mothers and children.” Participant 46 (Xhosa professional)

- “As mothers I think that if you see when they become toddlers as opposed to the olden days, you can see the bond that was created due to the carrying of the baby.” Participant 55 (Sotho professional)

- “Yes I do carry her on my back because now she is growing up, from 6 months until she tries to walk.” Participant 15 (Xhosa mother)

However, a professional expert considered that the baby learns less when on the back, and that this is not a positive attachment practice, as is evident in the following quote:

- “Not to put baby on back ... because you can’t teach your baby anything. As you walk past a tree you’re saying look at that beautiful green tree. Do you now think that baby knows where the green tree is unless you stop look and make that eye contact and say, look at that beautiful cup, look at the butterfly.” Participant 64 (Expert)

It is important to consider that the above-mentioned participant seems to focus more on early childhood development than on mother-infant attachment.

As indicated by the Sotho, Zulu, Xhosa, Indian and Coloured participants in this study carrying the baby on the back is considered easier, allows for chores to be completed, assists the baby to sleep, encourages touch, soothes the baby, facilitates bonding and keeps the baby safe. Literature reveals that carrying infants on the back is a common practice in some non-Western communities. Among the Beng people of West Africa, turns are taken to carry the baby on the back of a different babysitter every ten minutes, so mothers can work in the fields and perform their domestic duties more easily (Vicedo, 2017:10). Much research has been conducted on the importance of touch, holding and skin-on-skin contact, proving that carrying the baby on the back enhances positive attachment (Bick & Dozier, 2013:97). Touch and physical contact have been found to promote an infant's bio-behavioural regulation and general bio-psychosocial development (Bick & Dozier, 2013:97). Carrying a baby on the back is regarded as positive skin-on-skin contact (Mawani, 2001:17). Carrying practices all over the world are considered to promote positive attachment (Berk, 2013:433).

Further studies have been conducted in East Africa, where caregivers have spoken about carrying babies and infants in slings and on their backs while talking to, calming, soothing and singing as commom practices to enhance attachment (Arnett 2016:144; Mawani, 2001:17). Carrying practices are also perceived by mothers as a manner of responding sensitively to a child's distress, whilst still continuing daily chores of cooking and cleaning (Arnett 2016:144; Mawani, 2001:17). Many other benefits of carrying infants have been found by research, namely organising and regulating the child, reducing crying and colic, stimulating the development of the baby's nervous system, promoting language, social and cognitive development, protecting the baby from over-stimulation, encouraging sleep, and allowing parents to spend more time with their older children (Mawani, 2001:17).

Bearing in mind the findings of this study, which indicate that carrying practices are commonly practiced amongst South African cultures and have vast positive effects, carrying should be continually encouraged by healthcare professionals in early intervention programmes.

The belief that too much attention can be perceived as a form of spoiling across cultures sometimes interferes with certain attachment behaviours, and shall be described in the following sub-theme.

Sub-theme 5.4: Attention could spoil a baby

With many of the participants across all represented cultures, although giving the baby attention was considered important, it was clear that a balance is essential when paying the baby attention. Many Xhosa, Sotho, Zulu, Coloured, Indian and White mother participants expressed the idea that too much attention and responsiveness can be seen as teaching the baby the 'wrong things' and spoiling the baby. Some of the Indian and Black mother participants expressed the view that too much attention blocks the child from learning and becoming independent. The mother sample mentioned that imposing a limit on attention giving was not perceived as emotionally neglectful, but rather the correct parenting approach in many traditional African cultures. The perception of too much attention spoiling a baby is demonstrated by the following views:

- "That's one of the things I also spoke to my caregiver about because she'd usually say I was spoiling him that sometimes I must let him be even if he cries. I said I couldn't cope with the crying, I felt better when I was holding him." Participant 7 (Zulu mother)

- "But then in a Zulu culture it is like this. If your child is crying maybe you let him or her cry for like 30 minutes just to make sure that he is not spoilt or she is not spoilt. It is like that." Participant 24 (Zulu mother)

- "It is better not to always pick the baby up as you could be spoiling the baby, and then you will teach your baby to be a baby that loves hands." Participant 16 (Zulu mother)

- "It depends. If you fed your baby and followed the routine properly, and your baby is still crying you do not pick it up." Participant 17 (Zulu mother)

- "Well, if it is found that nothing's helping with the baby, then you come to the conclusion that the baby is just being spoiled or the baby is spoiled, just let the baby cry." Participant 9 (Xhosa mother)

- "And you cannot always pick them up, as long as you can see that everything is fine and when they cry maybe they will stop." Participant 10 (Sotho mother)

- "Sometimes they will say, 'no, just leave her so that she can be tougher', leave her a little bit, don't just go there and comfort her immediately. At firstly, like I was saying to my mom, my son was falling, then she said, 'no, leave her, he grows' and I said, 'no, that's not right'; because I'm feeling like I'm neglecting him. So, I have to react immediately. What if he got hurt or something has broken?" Participant 22 (Sotho mother)

- “In certain times, you kind of pick up on the child if the child is, you know, just taking advantage and doing it all the time. They also need to be taught you know. There is that with boundaries, it's time we go, go to bed and that you got to rest, or you got to do a certain thing. If you're not, you know, teaching them and telling them, then they won't know. So, at certain times you've got to say no, you don't do things like that.” Participant 20 (Indian mother)

- “I remember with my first daughter, the three-year old one, we didn’t bond that much because when I was staying with my mother she believed that you feed the baby, you bath the baby, you put the baby to sleep. Because as soon as you touch the baby or play with the baby, the baby will get used to your hands ...” Participant 30 (Xhosa mother)

The belief that attention could spoil a baby was evident in the following quotes by the participants in the professional sample:

- *“*If you’re really attached to a child, you don’t have to be holding the child. You do not need to be on top of the child all of the time. There needs to be a balance, you do not need to always be giving your child physical affection.” Participant 36 (Xhosa professional)

- *“*Certain values such as let your baby cry, do not always pick them up could be cultural. Don’t pick up, don’t spoil your baby too much is prevalent in Indian cultures, but I’ve seen it in the two opposite extremes. When we were doing training, the black Africans felt that too - don’t spoil your baby.” Participant 34 (Indian professional)

- *“*And then for example with picking up, we were raised very strictly from our grandparents and mothers, you don’t pick up a baby and what a child needs to learn you know, if a child is fed and they are clean you need to let them stay on the bed, so you’re not … find a coloured baby in somebody’s hands, you always hear an elderly shout you so a child must be in the cot, a child must be laid down, you don’t spoil the child to carry because although you’re complicating for the mum, while she’s alone she’s going to struggle on her own, so we don’t carry the baby a lot.” Participant 59 (Coloured professional)

Multiple caregiving in sub-Saharan African regions has been seen as a way for women to have more time for their domestic tasks. Therefore, not all their attention is focused on their children (Flanagan, 2002:88; Vicedo, 2017:10). In these societies, paying too much attention to the child is not considered a priority as there is little time. With this belief,

cultural views and goals towards attention-giving impact parenting styles and practices and play a role in the formation of attachment (Keller, 2015:181).

Therefore, as mentioned by Zulu, Sotho, Xhosa, Indian and Coloured participants, too much attention is often considered to be spoiling, unnecessary, time consuming and ultimately a negative parenting practice. This belief could have an impact on sensitive caregiving since certain physical and emotional needs of the infant may not be met as a consequence.

Face-to-face interaction and quality time was deemed important by a number of participants, as is evident below.

Sub-theme 5.5: Face-to-face interaction and quality time with the infant

As understood and voiced by the professional sample, due to the harsh living conditions and poverty of the majority of South African mothers, quality time and play focusing on the emotional needs of the baby is believed to be limited or at least not always the priority. Many mother participants across the represented cultures generally spoke of the importance of face-to-face interaction and quality time between them and their babies as a positive parenting practice. This is evident in the following quotes:

- "I talk back. When they are much smaller, I tend to make baby sounds, baby language with her. Then she responds more by saying 'Woooo' with me. And with the older one, I talk like an adult with him." Participant 6 (Zulu mother)

- "I hold her, I love giving her hugs and holding her, and she can see it because she loves hugging." Participant 13 (Indian mother)

- "Eye contact, hugging, patting, saying I love you ... Hugging, talking, kissing, tickling, full on attention, eye contact for longer periods of time. We very affectionate ... very!" Participant 4 (White mother)

- "You know just spend time with the baby. I think that is a big thing in our culture and that is what I don't see in other cultures. The baby is just left to be ... they just lying there. They are not being stimulated and played with and being made part of the family and the home." Participant 48 (White professional)

- "I would talk about how important it is to make time for your baby by giving it your emotional presence. Look at how work gets in the way of attachment, even if you have a babysitter, you need to still bond and look after your own child. Good caring does not end with food and clothes." Participant 36 (Xhosa professional)

Two other participants spoke of quality time not always being a priority in their cultures:

- “I think that also in the Indian families as well a lot of that I see happening where that attachment need is not being met by the parents, you know where they’re working constantly and they’re not around and they try and fulfil it in other ways and then it leads to behaviour problems more and more, especially now.” Participant 57 (Indian professional)
- “Not everybody again, but some don’t have time as I said, they’re always busy and the babies or the children hears that all the time that, you know what, I can’t do this because I need to work, I can’t do this I can’t do this because I need to cook, so it’s not a priority for them.” Participant 28 (Coloured mother)

Therefore, as mentioned by participants, quality time and face-to-face interaction is not always prioritised due to life stresses such as work being in the way of bonding practices with children. Studies have shown that quality time is integral to healthy attachment where the caregiver follows her infant’s emotional cues so that she is in tune with her infant, and communicates by listening, tracking, and becoming attuned in a real and non-robotic fashion (Siegel & Hatzell, 2003:82).

Face-to-face interaction leads to attachment behaviours that encourage secure attachment and self-realization (Holmes & Slade, 2018:46-47). Behaviours such as eye contact, smiling, touch, affect attunement, holding and feeding occur during face-to-face interaction (Holmes & Slade, 2018:25; Levy & Orlans, 2014:62-68). Such sensitive parenting behaviours are encouraged as they lead to many positive effects on the development of the infant, as well as enhancing the attachment between mother and infant (Arnett, 2016:175). The expression of these behaviours differs among different cultures across the world (Garcia Coll & Magnuson, 2000:95). Differences were also observed in the responses of the participants in that quality time was highly valued in terms of talking, holding, eye contact and spending time with the baby, as indicated by White, Indian, Zulu and Xhosa participants. Other Coloured and Indian participants spoke of a lack of emotional presence and a focus on practical roles which are prioritised.

Children and families are faced with many challenges today, taking them away from the luxury of play and quality time with each other. For the more affluent middle-class family, the problem seems to be that of too many choices and too much material indulgence, with few opportunities for face-to-face interpersonal play and contact (Jennings, 2011:3). For the less privileged populations living in impoverished settlements, the challenges are those of crime, poverty and drugs taking away the time, resources and energy to play (Jennings, 2011:3). Many children in South Africa are growing up in neglectful, poverty-stricken and drug-afflicted families where they are left unattended, alone and hungry (Aspoas & Amod, 2014:583; Bain, 2014:593). Therefore, infants living in both affluent and less affluent families are missing the opportunity to have quality time with their parents, to have their

favourite books read to them, or to feel the love of a hug and kiss in the form of quality time with their caregivers.

The views on play differed in the represented cultures: some valued and prioritised it and others less so, as is illustrated in the sub-theme below.

Sub-theme 5.6: Mother-infant play

Play as a form of quality time is important because within the process of play parents provide guidance, nurturing and safety, which leads to the development of trust and empathy (Booth & Jernberg, 2010:5). Early intervention programmes need to focus on the importance of quality time, play and connectedness even in impoverished environments.

Some participants spoke of singing and storytelling often being practiced amongst African cultures. Other White participants spoke of the use of stimulating, educational toys, and of the importance of the interaction with their child.

Some participants valued the role of play:

- "I think that the quality of the play is important. I like to do a lot of educational play - thinking stuff. In terms of TV and stuff I like to limit the cartoons and mindless stuff. We talk a lot too." Participant 3 (White mother)
- "Normally I'll take different toys and take them to her, and I'll see how she's interacting with the toys and then I'll play with her." Participant 6 (Coloured mother)
- "When I get home, we just play, it's our time. If I don't do that then, you know when you feel that longing in your heart." Participant 12 (Zulu mother)
- "For instance, seeming when you have done all your chores and you have cleaned and everything is ready, you can play with your child ..." Participant 49 (Xhosa professional)

Other participants, mainly from the Black African cultures, indicated that mother-infant play is not an acceptable form of engagement.

- "I don't think play is valued, I think it's something that keeps the child busy and maybe, have the child out of the way so that they can carry on with what they have to do. … Because the child wants to play but the mothers from my culture, they have deficits like that says that there's no involvement in the child's play." Participant 53 (Sotho professional)
- "For Africans, playing with the child is the last thing they look at. The mother must look after the home. This is a general African thing." Participant 60 (Zulu professional)

- "They don't get involved and I'm basing this on the Pedi culture, I'm not basing this on each and every Sotho, because they don't play with their kids and I think, I could be wrong, but I think it is the African way of raising … Yes, I think you can just look at how they play, because with the Sotho dad I've never seen them playing with their kids in public." Participant 43 (Sotho professional)

- "I've never experienced or seen an older person playing with, you know, their kids." Participant 46 (Xhosa professional)

- "But I think there's just not much time because it's lack of knowledge that you better be strong with the child that you spend time and you play with them. I don't think they play, they just like give them the toy, go play there on the corner, so I don't think there's much time that mothers give their children, especially attention as in playing with them." Participant 62 (Zulu professional)

A lack of time and parental responsibilities was mentioned as aspects that affected the mother's or father's engagement in play with their infants.

- "Well, we do play sometimes a little bit, but there is not much time to play. We let them play maybe with other babies or when they grow up, with other children, but the mother doesn't have time to play with the babies because, like I said the father is not, like, too involved with the baby, not just with baby, with the house work. So, everything falls on the mother's shoulders." Participant 9 (Xhosa mother)

- "Maybe if we play I will just talk in my case. We do play but then I'm like now I'm so tired. I've not even started but it's like I'm not ... okay the willingness part is gone already. It's like you know what go and play outside and I will maybe ask who and who to come and join you because I'm too tired." Participant 24 (Zulu mother)

- "Not all of them again, not all of them but you do get the one's that, I don't have time, I don't have time, I need to go and work, I need to do this, I need to do that, there's always something. I need to feed you, I don't have time to play." Participant 28 (Coloured mother)

One professional expert participant, however, warned that playing with a child will not necessarily create an in-depth mother-infant attachment, whereas another mentioned that mother-infant play would not necessarily be indicative of positive and healthy attachment.

- "… playing with the child, you're not going to create that inner depth attachment relationship that's required." Participant 65 (Expert)

- "We found very little play and I don't think play is particularly indicative of attachment or sensitivity in our experience. You could have a securely attached child who hasn't been played with by the caregiver." Participant 69 (Expert)

Another expert expressed the concern that mothers' excessive engagement with electronic media such as cell phones, negatively affected their close engagement with their infants.

- "Another thing that concerns me with the white culture, is a lot of mothers and the cell phone, they are on their cell phones the whole time, people are not available. The children are not able to really connect with these parents." Participant 67 (Expert)

Although not valued by many mother participants and some expert participants, play is seen as promoting healthy, attuned interactions between the parent and child, as well as secure attachment and lifelong mental health, allowing the parent to begin to see the child for who she is, increase self-regulation, and promoting an enjoyable relationship with the child (Booth & Jernberg, 2010:4; Jennings, 2011:3). Encouraging the art of culturally accepted creative play and quality time in an early intervention programme would therefore have widespread and long-term benefits for the development of a secure base within the infant, across all cultures.

Play is furthermore an important activity that helps to value, nurture and support the development of the infant's true self, and to promote creative ways of learning and growing (Booth & Jernberg, 2010:4; Holmes & Slade, 2018:47; Jennings, 2011:3). Sue Jennings refers to '*dramatic response'* which describes when mothers are able to play dramatically and take on the roles of others in thought or action (Jennings, 2011:30). Neuro-Dramatic Play is defined as "the sensory, rhythmic and dramatic playfulness occurring between a mother and unborn baby and a mother and newborn from conception to six months" (Jennings, 2011:33). Neuro-dramatic play affects the growth of the brain, the chemical balance of the body and the healthy attachment between infant and parents and influences the emotional and social development of the child (Goldenring et al., 2014:521; Schore, 2000:30).

Views on discipline seemed to be culturally influenced, with some participants voicing a strict stance with clear boundaries to be valued and others being more lenient in their parenting practices. The following section further describes this sub-theme.

Sub-theme 5.7: Views on discipline

Some Black African and Coloured participants associated 'good parenting' with being firm and with physical punishment as a way of disciplining, especially with a male child. Maltreatment was also mentioned by some of the participants as a social problem obstructing attachment. Some Zulu participants discussed how 'being tough' with their babies and children is considered to be good parenting in the culture. The importance of

maintaining a divide between parent and child was also voiced as a form of ensuring respect. Neglect was mentioned as a problem, in that mothers in rural areas often leave their babies alone if there are errands to be run and there is no one to take care of the baby. A Zulu professional participant stated that this is when incidents of rape occur from a very early age.

The following quotes illustrate the differing views on discipline by the participants:

- "Like you shouldn't just be a soft parent, when he does something wrong, I must always have a firm hand towards him. And you know, just make him a bit more. Like don't, you know how people raise girls, and they're too gentle and everything, with the boy apparently you need to be hard on them. Because right now I'm facing a situation where my uncles and everyone is telling me that maybe I should be harder on the baby and not baby him too much." Participant 18 (Xhosa mother)

Some participants pointed to harsh discipline that could impact on sensitivity of care:

- "I mean you know coloured people are old-school, they believe in that, taking the belt or hitting on the hand or what but you know ... now I'm a social worker or what but we do have that where for example what we do as discipline. Whereby in the normal coloured community definitely the physical punishment is there, that's not a secret, you understand ... even as infants, we were very, very young you know, if you don't listen you get a beating you understand." Participant 59 (Coloured professional)

- "I mean that the babies don't get as much attention, as much care and there's the punishment, they get very punished and then sometimes it goes to an extent of beating as well." Participant 53 (Sotho professional)

- "I am raising him in a Zulu culture group. We believe in spanking a child. We believe that if we do so it is like we have the power or the control over the child in a way. So we believe in spanking mostly." Participant 24 (Zulu mother)

- "If you go to Eldorado Park, they very rough with the children and swear at them and it is a very harsh community" Participant 29 (Coloured mother)

It is important to consider that harsh parenting and maltreatment are risk factors adversely affecting positive attachment between the parent and child (Berlin et al., 2011:162). Harsh parenting in terms of physical punishment and beating, as indicated by participants, limits a sensitive response and instills fear in the child. Maltreatment of infants and toddlers is a serious public health problem all over the world (Berlin et al., 2011:162). In a study

conducted in the United States in 2006, 2.4% of 1000 abuse victims were between birth and one year of age, with the most common form of maltreatment (40% of cases) being maltreatment by a female parent acting alone (Berlin et al., 2011:162; Casanueva et al., 2010:557). Children younger than four years of age represent 31% of all maltreated children in the United States (Casanueva et al., 2010:557). Studies have found that the earlier abuse begins, the higher the likelihood of it reoccuring and having intense lifelong effects (Berlin et al., 2011:162). It has been found that a parent's history of physical abuse is a key risk factor of parents abusing their own children. Research findings pointing to inter-generational continuity of abuse are robust. Just as culture is inter-generationally transferred, so are certain dysfunctional practices such as parental maltreatment (Berlin et al., 2011:162). Harsh parenting takes away from a feeling of safety where the child feels they can return to the caregiver when in need of a sense of security, support, protection, and love.

It has been found that mothers who have been investigated for maltreating their infant babies have reported their infants to be crying continuously and difficult to soothe (Casanueva et al., 2010:557; Nelson, 2005:54). In multi-variate studies, it has also been found that mothers who perceive their infants to have difficult temperaments have been victimised themselves in their earlier lives, having a childhood history of abuse and neglect (Casanueva et al., 2010:557; Nelson, 2005:54). According to the ecological systems model, child maltreatment results from multiple factors, such as caregiver characteristics, family functioning, child characteristics, poverty, and lack of social support (Casanueva et al., 2010:557).

Child maltreatment is affected by a number of psychological, social and economic factors, and social problems such as poverty and past experience of abuse, which are common problems in South Africa (Aspoas & Amod, 2014:583). Self-care and emotional self-regulation are thus important aspects to be considered in an early intervention programme. This focus on emotional self-regulation and co-regulation would thus be an important consideration for the programme developed in this study.

Other social adversities that have an impact on attachment, such as poverty and modern lifestyles, are discussed in the following theme.

6.3.6 Theme 6: Socio-economic circumstances

In addition to culture, attachment could be influenced by social and economic factors such as parents' internal working models and parenting styles, social adversity such as child abuse and neglect, poverty, unemployment, family stressors, and the emotional climate in the home (Berk, 2013:434, 436; Louw & Louw, 2014:136). These factors were raised by participants and will be discussed in the following sub-themes.

Sub-theme 6.1: The effects of poverty and adverse conditions

This theme, focusing on the wider socio-economic context, is one that the professionals and mothers stated could not be forgotten. With the socio-economic and political contextual issues within South Africa, it would be incomplete to focus on mother-infant attachment without bearing socio-economic, developing world contextual considerations in mind (Cooper et al., 2009:2). The following quotes demonstrate the impact adverse conditions in South Africa could have on attachment:

- "In addition to what is already said, in South Africa, I would always be aware of socio-economic and political influences that undermine family life, attachment and security, such as poverty and violence." Participant 68 (Expert)

- "... going back to the beginning that in terms of the poverty you know, that the majority of our families and mothers have to bear, and in addition to the attachment because there is that situation where they have to put food on the table and financially sustain themselves and that attachment is neglected as such. … Because if you look you know, at the majority of mothers coming from the black cultures, the poverty-stricken areas that they live in. Sometimes they're left with no choices in terms of having to care for their infants and you know, infants are left with grannies or with other people and that there's no secure attachment …" Participant 56 (Indian professional)

- "Firstly, in South Africa due to apartheid, we had a culture of interrupting the mother-child bond - mom sends child to be raised by granny while she works. Secondly, there is a high drive for survival in South Africa, which is considered more important than closeness and nurturing. Thirdly, HIV has played a role. When I worked in adoption, I dealt with many abandoned babies with HIV mothers. In order for the mothers to start working on their attachment to their babies, they need to accept the HIV first. HIV severs the attachment and disrupts it in the first 6-8 months which are critical." Participant 66 (Expert)

- "In a lot of coloured communities, work becomes the centre of everything. To them taking care of the kids' physical needs are so important." Participant 5 (Coloured mother)

- "Sustained extreme poverty if it impacts on the identity of the mother, if it impacts on her self-esteem, if she is at that level of toxic stress as such that she is preoccupied with it all the time, then that would inhibit her attachment behaviours and response to her child. We are certainly seeing some of that in our context ... Similarly, for fathers if there is chronic poverty, and of course poverty rarely comes on its own, people that are desperately poor often have to live in conditions that are inhumane

or that they might be high levels of crime, and if there's that level of fear and or violence then that would then impact on attachment behaviours. So, a baby might have to learn very quickly that they need to be quiet, a certain kind of attachment style, a dismissive attachment style would need to be in place in order to survive and so it's not such a simple thing as saying poor socio-economic equals poor attachment." Participant 69 (Expert)

- "I think most parents want to be attuned but there are practical circumstances that do not allow them to have this contact. There is a tendency for the young ladies to have babies for the grant but the money is not given to the grandmother who takes care of the baby but maybe just a little bit of that. So financial impact across the board is quite serious." Participant 67 (Expert)

- "We were called out to … families in terms of abuse and misuse or abuse of alcohol … and that was with infants and babies under 2 years old." Participant 32 (White professional)

- "I'm going to be honest. Now, in South Africa coloureds don't really have much of a future. They think of coloureds are the ones who can't speak properly who never studied properly and are always the drop-outs so if a parent is not there the child ends up neglected and eventually taking drugs." Participant 6 (Coloured mother)

- "… children that are abandoned ... They are unable to take care of their infants and then they just, I had this one case where the mother left the child with someone who was selling veggies at a corner." Participant 39 (Zulu professional)

- "You know and there's so much of social ills going on in terms of the drugs and the alcohol, we have also children with a lot of the alcohol foetal syndrome affecting attachment" Participant 57 (Indian professional)

- "There are so many cases; some of them are not reported. Like a child burnt in the room or he or she got hurt in a way. Only to find out that the child, he or she was by himself or by herself in that room. And mostly some of the people in the community as such are aware of that. So as the mother is walking out or maybe is out, they will just walk in and rape the child. Because they are aware that she is not around." Participant 24 (Zulu mother)

- "Okay you find that this mother has a baby but she doesn't attend to the baby, the baby is not clean; the baby is not well fed. At some point the baby is locked inside the house on his or her own for days." Participant 9 (Xhosa mother)

This situation also seems to apply to grandmothers as primary caregivers, as indicated by one of the expert participants in the sample:

- "On a practical level, what I see is that these grandmothers are often overwhelmed, financially they find it difficult to take care of all the children. Their stress level is very high, so I see as a social worker that the quality of care is not good as the children are often left to their own devices. There isn't an adult attachment figure." Participant 67 (Expert)

As is indicated by participants from the represented cultures in this study, adverse conditions such as poverty lead to a stronger focus on the physical care of an infant as a form of 'good parenting'. Physical care as mentioned by participants in terms of a drive for physical survival in the country, ensuring the infant has been fed and taking care of general practical circumstances, seems to take precedence as a result of the adverse conditions facing many South Africans. As is evident from the quotes, participants spoke of social adversities such as toxic stress, chronic poverty, violence and neglect all affecting positive attachment practices between mother and infant in South Africa. Studies conducted in South Africa in the impoverished township settlement of Khayelitsha (Western Cape), found that mothers living in poverty had high rates of HIV/AIDS and maternal depression, which affects mother-infant interaction (Cooper et al., 2009:2). The ability of a parent to provide the kind of care required in infancy that promotes secure attachment is seriously compromised in adverse conditions such as poverty, most particularly when maternal depression is high (Aspoas & Amod, 2014:583; Cooper et al., 2009:2). As a consequence, these social factors lead to high numbers of orphaned children with implications for child mental health (Bain, 2014:593). Sensitive parenting becomes difficult in such harsh conditions as a result of a preoccupation with external problems.

Globally, South Africa has the highest number of pregnant women with HIV/AIDS using antiretroviral treatment (Fatti, Shaikh, Eley & Grimwood, 2016:114). There is a critical shortage of professional health care workers dealing with mothers and infants in South Africa (Fatti et al., 2016:114). There are many psychosocial stressors facing pregnant women diagnosed with HIV/AIDS in South Africa, and for women with babies who have alcohol foetal syndrome. These psychosocial stressors include a poor understanding of HIV/AIDS and the syndrome, high levels of depression amongst women diagnosed HIV positive and challenges in the practical demands of taking antiretroviral treatment (Fatti et al., 2016:116). Women are also faced with stressors around continued substance abuse and lack of partner involvement and support in the diagnosis and treatment of HIV/AIDS. Such factors add pressure to the over-burdened professional healthcare staff at antenatal clinics (Fatti et al., 2016:116). Adverse conditions and psychosocial pressures often have an impact on the sensitive mothering of infant babies, and are considered significant factors in this study.

Sub-theme 6.2 Modern lifestyle and overwhelming responsibilities

The stressors of modern living in urban areas, with many mothers living away from their children to earn an income, became apparent as a possible obstruction to mother-infant attachment. Modern lifestyle and overwhelming responsibilities are evident in the following views:

- "When the mother lives in the city, she is going to work, and so the contact is very little. Sometimes the child is left with the grandmother. Life is very busy in the city, and many mothers don't even get maternity leave." Participant 33 (Coloured professional)

- "In the West there are more flexi hours where in South Africa you don't really have that option, so I think their bonding time is longer whereas in South Africa 3 to 4 months maternity leave; some moms go back earlier as they are not paid maternity leave whereas in your Western countries you get paid maternity leave which is wonderful as it gives you time to bond with your baby for up to a year." Participant 32 (White professional)

- "I don't think they have that thinking or that resource or information to know that when you have a child, you must let the child be in crèche not be with your child ..." Participant 62 (Zulu professional)

- "Sometimes parents come home very late, and the baby is left with the nanny leading to little bonding." Participant 38 (Zulu professional)

- "Most women are working, and some are even working more than one job. And with women being recognised and being even in these high positions, their responsibilities are too much. Now, the time you spend or even as a mother, the time that you would want to spend with the baby is now being cut off because of these other things ..." Participant 55 (Sotho professional)

- "Well you see the thing is that in the coloured community to be honest, I don't think they are very sensitive to the children and the problem is moms like to party and they don't like to take care of the children." Participant 29 (Coloured mother)

Modern lifestyles and overwhelming responsibilities have raised questions around the importance of quality childcare, parental employment, and attachment (Berk, 2013:441). As a result of work responsibilities, many children are in day-care and receive non-maternal care from as early as four months of age (Arnett, 2016:218). African American infants and toddlers in the United States are in day-care for the highest number of hours per week

compared to Latino and White infants. Latinos are in day-care for the second highest, and White infants and toddlers for the least number of hours (Arnett, 2016:218). Findings reported in the literature has shown that the quality of childcare is most important, regardless of socio-economic status (Arnett, 2016:218; Berk, 2013:441). Many hours of average to low quality non-parental care lead to lower social and cognitive abilities. Good childcare has also been found to reduce the negative effects of socio-economic problems in the home (Berk, 2013:441). Therefore, despite the modern lifestyles of some of the participants, leading them to work long hours, it appears that choice of day-care is more important. Caregivers must be consistent, sensitive and nurturing. The programme in the study therefore should also reflect on the importance of the quality and consistency of other caregivers.

Exhausted and anxious mothers who feel overloaded by work and family pressures may respond less sensitively to their infants and place pressure on their infants' sense of security (Berk, 2013:442). Due to the increase in paternal involvement in childcare, fathers are also reporting conflict in balancing their difficulties around work, family life and responsibilities (Berk, 2013:442). These daily stressors impacting attachment are reflected in the statements by the participants in terms of working long hours and having to leave children with babysitters.

Sub-theme 6.3: Single parenthood and teenage pregnancy

Single parenthood and teenage pregnancy were considered by the professional participants to be an important possible obstacle to fostering secure attachment between the mother and infant. As mentioned by the participants, socio-economic problems are an obstruction to maternal sensitivity, as many women find themselves in situations where they are not financially or emotionally able to take on the responsibilities of raising a child. The incidence of teenage pregnancy is also high in South Africa, leading to the same problems (Muruya & Sebitloane, 2013:174). Such social problems are more common in under-developed, rural areas where there are fewer resources available.

The following quotes illustrate the social problem of single parenthood and teenage pregnancies:

- "I would say my mother, the child's grandmother. I had my baby in matric and so my mother took care of my baby." Participant 16 (Zulu mother)

- "There are lots of people that want to stay home with their baby; they got to go back to work. So, there are two different pressures and at the end of the day, if you're a single parent and you have to work, and you would love to stay home and breastfeed your baby and that's what your culture kind of dictates, you're not going to be able to do it. … There are lots of people that want to stay home with their baby; they got to go back to work. So, there are two different pressures and at the

end of the day, if you're a single parent and you have to work ..." Participant 63 (Expert)

- "Because like I said you mostly find single mummies having to work 24/7 and still having to come home and take care of a child with a disability and in many cases other siblings. So, they get tired." Participant 47 (Coloured professional)
- "Teenage pregnancy is terrible in the coloured community, and that's when the child has no bond with one or both the parents." Participant 6 (Coloured mother)

- "I think the big thing to remember here in our situation is these (teenage) mothers I think 95% of them didn't want these babies in the first place. It just happened because they were having sex. So, it is not a planned thing. … It is not … where you will plan when you are going to have a baby now. And you have a baby, you are prepared for it and you are financially ready. You are stable, you have a home. With them it just happens. So, they never wanted this baby, they never asked for it, it just happened. It is just a child." Participant 48 (White professional)

- "Most of them (teenage mothers) … the other thing is we are not mentioning fathers here. … probably 99% of them say they know who the father is. … The fathers do not play a role at all, at all, at all." Participant 9 (Xhosa mother)

As mentioned above by the Xhosa mother participant, fathers do not always play a strong role, especially in the case of young, teenage mothers. Participants indicate that many women are left to raise their children alone and have to provide for their children physically, emotionally and financially, which can take mothers away from their children and possibly obstruct attachment. As a consequence of these pressures, grandmothers are often left to take care of the child.

Research has confirmed that approximately 53 million abortions a year are performed around the world, mostly in poor, developing countries (Muruya & Sebitloane, 2013:172). Unwanted pregnancies in South Africa often occur amongst single and financially dependent mothers who are unemployed or students; thus, women who are generally young and unmarried (Muruya & Sebitloane, 2013:174). Adverse circumstances lead to some women being powerless in South African societies and considered inferior to men, leading to abusive situations and a high rate of unwanted pregnancies in informal rural settlements (Aspoas & Amod, 2014:583). A recent study conducted at Northdale Hospital in Kwazulu-Natal found that most women seeking termination of pregnancies came from the neighbouring townships and from a poor background (Muruya & Sebitloane, 2013:175). The use of contraceptives was also found to be influenced by cost and accessibility in this hospital, and a significant number of women seeking termination of pregnancy were also found to be suffering with STI's (sexually transmitted infections). Unwanted pregnancies are

a problem in South Africa affected by socio-economic circumstances such as HIV/AIDS and extreme poverty, which further affect mothering (Fatti et al., 2016:114).

The sub-themes discussed in theme 6 highlight that socio-economic factors such as poverty and adverse conditions, discipline and maltreatment, modern lifestyles, single parenthood and teenage pregnancy in South Africa have an impact on parenting practices, which may impact the development of a secure attachment between parent and child. It is not easy to determine which parenting practices are linked to culture, or society as a whole, or the norms of families. As particularly mentioned by a professional expert, one needs to be careful about what constitutes a break in attachment, and whether the behaviour is trauma or inter-generational trauma, or attachment-related. This is evident in the following quote:

- "I think that there are large parts of South African society that are traumatised, and I think that there is some misconception that behaviours that I think are a response to trauma are understood as being attachment related, and I think it's very important to make a distinction between what are behaviours that are as a direct result of trauma and inter-generational trauma and what are cultural, and I think there's a need for more research and picking this out more. For instance, some people say that sending their baby to go and stay with their mother in another province or in the rural areas is cultural; now I don't believe that that is cultural at all. I think that that is a consequence of migrancy in the history of our country and strategies that have been developed inter-generationally to be able to manage the demands of a family ..." Participant 69 (Expert)

The researcher explored the various views of the participants with regards to an attachment-based programme in the South African context. These are expressed in the following section.

6.3.7 Theme 7: Suggestions for content of an attachment-based programme for the South African context

The professional and expert participants in this study spoke of some important factors to be included in a programme in a South African context. The participants often found it difficult to specifically focus on the effects of culture on attachment. They spoke about it being interwoven with other social factors in South Africa, as mentioned earlier in this chapter. The researcher provides some quotes from the professional and expert participants to illustrate the following cultural aspects that were suggested as factors to be considered in a programme.

Sub-theme 7.1: Knowledge of attachment and the importance thereof

The opinion of the participants was generally one where certain features of attachment were considered similar across cultures. Providing foundational knowledge on attachment

drawn from some Western programmes was mentioned as relevant, and is evident in the following quotes:

- "Parents, in my opinion, need to learn to bond with children at younger ages. They miss the milestones of development. They need to learn about emotional attachment. It is very important for parents that the child needs to have a relationship with both parents." Participant 60 (Zulu professional)

- "It starts at your clinics and your hospitals ... With mothers having babies and understanding how important attachment is and bonding is, you know. In other words, for that infant to have to grow up feeling secure and loved." Participant 56 (Indian professional)

- "The importance of a child to maintain a relationship with a primary attachment figure like a mother. I think a genuine sensitivity for their children. Educational part of what is attachment and how does it work." Participant 67 (Expert)

- "... you know because I think we need to expand on those variables you know, responsiveness and sensitivity. What does that mean for a teenager, what does that mean for a toddler you know, what does that mean for a child in middle childhood?" Participant 65 (Expert)

- *"*New mothers need to be made aware of the importance of bonding with their babies and attach better - especially the mothers in the cities." Participant 33 (Coloured professional)

One participant mentioned that mothers need to have a basic knowledge of child development as a background to attachment, to understand the needs of their infants and how to respond appropriately.

- "I think that is the normal, in a programme I think all mothers, irrespective of what culture you come from, they need to learn about the stages of development in infancy. All mothers have the same anxieties; they have the same worries about am I doing the right things for my baby. No one has this manual readily at hand about motherhood. Everyone is anxious about diaper and the baby is crying, is it wind, and is it something you know. So, I think some kind of guidance of developmentally what your baby needs irrespective of culture." Participant 44 (Indian professional)

Therefore, participants expressed that basic knowledge on the stages of development, sensitive parenting and attachment is necessary as a foundation in a programme, irrespective of the culture of origin. Participants indicated that many parents do not truly understand the meaning of secure attachment, attunement and empathy and that this should be an important focus in a programme. Most attachment-based parenting programmes explain the basic concepts of secure versus insecure attachment, attunement,

internal working models, as well as historical attachments and their effects, as a baseline from which to teach better attachment practices that become more culturally specific (Berlin et al., 2013:82; Lee et al., 2013:266). Many programmes employ a cognitive-behavioural approach, assisting mothers to reinterpret their own childhood experiences and their effects (Lee et al., 2013:266). It is apparent that covering basic information on attachment is required in a South African attachment-based programme, where caregivers are educated on the main attachment concepts as a first step.

Studies have shown that there is a need for further research on the complexity of attachment and how cultural influences affect attachment practices (Arnett, 2016:219; Marmarosh, 2015:13). Attachment theory is still considered to be biased towards Western ways of thinking, which certainly has an impact on the work of clinicians with clients from different cultural backgrounds; thus, theoretical concepts covered must be sensitive to this fact (Marmarosh, 2015:16). Still today, many psychotherapists rely on Western understanding of secure attachment when working with their clients (Marmarosh, 2015:16).

Sub-theme 7.2: The concepts of responsiveness and sensitive parenting

The professionals voiced the importance of discussing sensitive parenting that is attuned from the mother to the baby. The professionals were of the opinion that attunement and sensitive parenting are not always understood but are at times intrinsic. Participants indicated that this process should be explained and understood in the programme as the nurturing aspect of sensitive attachment should be accentuated, across all cultures. This is evident in the following views, which illustrate the importance of the inclusion of responsiveness and sensitive parenting in the programme:

- "The importance of a child to maintain a relationship with a primary attachment figure like a mother. I think a genuine sensitivity for their children is important. … How sensitive do you need to be to be available for your child? You need to be emotionally in tune and available even though you might not always be present in the same situation. Your child needs to know that if I do need my parents, my parents will be there. … because if you can't regulate the child and then simultaneously slowly build the child's capacity to self-regulate. If you can't regulate a child and keep on regulating that child, that's problematic." Participant 67 (Expert)

- "But basically, you know, following your child and taking care of your child on an emotional level as well is the best you've done and learning how to actually really to do that, to respond ..." Participant 37 (White professional)

Some participants mentioned that the programme should not only be based on theoretical knowledge, but also on demonstrating what sensitive care means in practice.

- "Yes, I must add that, because theory is theory you know, at the end of the day I guess they need to learn how to actually show the care." Participant 37 (White professional)

- "Practical things - how can you attach to children when you have a newborn in your house." Participant 34 (Indian professional)

- "We need to look at issues around how the baby is fed; we need to teach a gentle, sensitive way." Participant 35 (Xhosa professional)

The quality of care is an important factor to be included, as the South African context is often affected by harsh circumstances leading to maternal depression and poorer quality of care (Aspoas & Amod, 2014:580; Bain, 2014:599). It is important for professionals to reach out to caregivers on their terms in parent-infant intervention programmes, and to understand and work with adverse circumstances in teaching quality care (Aspoas & Amod, 2014:58; Bain, 2014:593).

Research has demonstrated that a focus on sensitive parenting in attachment-based programmes enhances parental sensitivity and has a positive effect on attachment security (Berlin et al., 2013:81-82; Velderman et al., 2006:266). In interventions that focus on mother-infant behaviours, mothers are taught various practices on how to sensitively respond to the attachment signals of their infants (Velderman et al., 2006:266). It is difficult for a parent to attach sensitively when their own inner working model has remained insecure. Attachment programmes thus work on historical attachments of the parent and resolve the issues that are stumbling blocks which affect current attachments, in order to heighten parental sensitivity to the child (Velderman et al., 2006:266).

Learning to follow a baby's cues sensitively is of utmost importance in developing secure attachment (Holmes & Slade, 2018:46). Sensitive behaviours by means of eye contact, affect attunement, being aware of the baby imitating expression and enjoying stroking, sensory play while feeding and washing, rocking, humming and singing, as well as talking and communicating with the baby, are all important sensitive maternal behaviours in facilitating mother-infant attachment (Holmes & Slade, 2018:25-26; Levy & Orlans, 2014:16). Such behaviours should be accentuated when being taught to care for a baby in the initial stages of life as they generally have a positive effect on a psychological, mental and social level (Jennings, 2011:112).

Sub-theme 7.3: Parenting skills and parenting styles

Parenting styles were voiced as important by the participants from the samples of professionals and experts as a form of maintaining positive attachments with children. Parenting styles were mentioned as integral in providing skills for mothers sending their children to rural homelands, not having the opportunity to acquire the parental experience

and skills necessary. Parenting styles are said to be governed by cultural views determining the boundaries set by parents and whether nurturance or obedience are prioritised (Flanagan, 2002:92).

The following quotes by the participants illustrate the importance of including parenting skills and styles in a programme:

- *"*I think there needs to be a focus on parenting skills ... In cities, moms send children to rural areas, and so these moms do not develop parenting skills. There needs to be work done on communication, positive discipline and a reward system put in place." Participant 33 (Coloured professional)

- "I think you should focus on firstly, parenting skills ... Really parenting skills would be crucial." Participant 45 (Xhosa professional)

- "But I think if, in that programme there's also like some guidelines on the parenting skills or the different parenting styles or something like that. That can, you know if someone gets information like that they say at the end, if there's this parenting skills guidelines that can work in a group form and then when they have to be presented in a community that has the Zulu culture ..." Participant 62 (Zulu professional)

- "Yes, ... reading the child's signals, being able to, in fact even a preoccupation with it, an over-occupation with it which means that you really start to mollycoddle the child instead of really setting out boundaries and firmness in the interest of the children." Participant 65 (Expert)

- "... and when you would assess them (children), you can see that the problem it's more likely to have emanated from, not necessarily only the mother-child relationship and bond but parental upbringing or parental skills ..." Participant 55 (Sotho professional)

- "Parenting styles are important. One must look at the correlation between a parent that prioritises structure and obedience over a parent that prioritises nurturing and engagement." Participant 66 (Expert)

Boundaries and limit setting are important parenting skills in terms of attachment which reflect on the parent's ability to allow the child to explore the environment within limits and provide a safe base for the child to return (Mercer, 2015:383). The importance of boundaries and limit setting leading to the development of a secure base within the infant was stressed specifically in the following quotes:

- "… twelve is still little but at twelve months, sort of on the cusp of starting to set limits for the baby. Because you can crawl and put your finger in the plug, you can

do all, even if you think what a twelve, six to twelve-month baby could do, they start to do things and it's now also setting the limit, not like this, but like that." Participant 65 (Expert)

- "Structure or engagement and good framework is important ..." Participant 66 (Expert)

- "I think, definitely setting boundaries in place, a good balance of discipline." Participant 42 (White professional)

- "Yes, there is a belief of picking the baby up. However, there's time limit and the purpose for doing that. You can't just pick your baby for fun, so for the sake of it ..." Participant 49 (Xhosa professional)

Understanding parenting styles and skills was mentioned as important knowledge by the participants who were professionals and experts, where they spoke of a balanced view with some boundaries being necessary when nurturing and disciplining a child. Parenting styles are understood to be influenced by culture and to affect boundaries, routine and quality of interaction, and thus attachment practices (Flanagan, 2002:92; Jones & Cassidy, 2014:438). Research has demonstrated the link between self-reported attachment styles by parents and various approaches to parenting (Jones & Cassidy, 2014:438; Mingo & Easterbrooks, 2015:471).

Parental skills and knowledge are required to assist parents in better attaching to their infants whilst providing consistent boundaries (Aspoas & Amod, 2014:580). It is significant that parents get to know the importance of physical development, psychological stages of development and attaching with their children, while still imposing limits sensitively; assisting their children to feel safe and secure (Jennings, 2011:100).

Parenting styles are considered to be adapted from one's individual personality and transmitted culturally from one generation to the next (Flanagan, 2002:92). Parenting styles have been proven to have two main dimensions which affect parent-child relationships and need to be considered, namely parental control and parental warmth (Flanagan, 2002:92). Studies have shown that children react more altruistically when they have had positive, warm and responsive relationships in childhood (Flanagan, 2002:92). Parental warmth has thus been found to support attachment and is another important skill for parents to develop.

Insecurely attached parents have been linked to less sensitive and responsive parental behaviour, which has been found to be less supportive and not as attuned to a child's signals (Bernier et al., 2015:1861; Jones & Cassidy, 2014:438). Insecure parents have been found to interfere with environmental exploration of their children and to express less

teaching behaviour (Jones & Cassidy, 2014:438). Secure parents are more able to be responsive to emotional needs and to allow exploration of the environment which are important skills that promote attachment security in children (Bernier et al., 2015:1861). Skill development is considered to be an important aspect to parenting programmes in South Africa, where parents develop skills by means of role playing and homework tasks (Wessels, 2012:17).

Teaching attachment-focused parenting techniques have been found to reduce stress centred emotions in infants and young children (Miller & Commons, 2010:1). Attachment-focused parenting styles which facilitate child-centred attachment parenting practices and enhance parental sensitivity and attachment practices such as holding and touching, responsiveness to crying and co-sleeping practices are encouraged, rather than parenting styles that lead to controlling behaviour (Miller & Commons, 2010:5).

It has also been found that attachment-focused parenting practices lead to positive outcomes within the infant such as responding more flexibly when frustrated, seeking appropriate help from adults, persistence and higher levels of confidence in peer interaction (Miller & Commons, 2010:6). Thus, knowledge on sensitive parenting styles and attachment parenting are integral in fostering a more secure base in the infant in the present and the future.

The professional and expert participants mentioned that mothers should be made to understand their learned parenting style as a consequence of the past, in order to understand themselves better and develop skills to mother in a sensitive, nurturing and warm manner. The mother's ability to create a safe environment by sensitively assisting the infant to understand her limits is important in the development of a secure attachment, and in order to emotionally co-regulate the infant and herself. This is therefore an important theme to be explained and discussed in a programme.

Sub-theme 7.4: Maternal self-regulation

Professional participants voiced the importance of emotional self-regulation of the mother in order to regulate the infant's emotional state. According to professional and expert opinion, maternal emotional self-regulation is important across all cultures. The following quotes demonstrate the expert participants' opinion of the need to discuss and explain emotional self-regulation in the programme:

- "When you see her with her child, it's catastrophic if she can't set boundaries for him, she can't set limits for him, she can't contain him, she can't keep him engaged. You know, she just can't and she tries but she just doesn't have the capacity. So the one thing that I was very, I was very sensitive to the fact that it's all about self-regulation. So it's about you regulating yourself and it's about you imparting to the child because the nervous system, the nervous system has not been regulated so you

need to act as a regulator to your child, and she has to develop the child's capacity to regulating by herself … It's the crux of the deal in these early years ..." Participant 65 (Expert)

- "But the importance of parents taking care of themselves ... Taking care of themselves, seeing themselves as the engines for these babies, therefore, if they are not in a good emotional state, the chances are that it, it did affect the relationship with the child ..." Participant 49 (Xhosa professional)

- "I think it's very important to focus on the mom alone too, I mean pregnancy is huge, getting through those nine months, all the anxiety so I think it's very important to start off with the mom, just a little bit of motivation and upliftment and a bit of counselling ..." Participant 59 (Coloured professional)

Emotional regulation is defined in the literature as the ability of a person to continually moderate the process of increasing or decreasing the intensity or duration of desired or undesired emotions (Horenczyk et al., 2015:339). Emotional regulation can be described as ways in which a mother selectively attends to specific situations or parts of a situation, and ways in which she thinks about the situation in order to contain her emotions (Horenczyk et al., 2015:339). A mother's supportive responses to her infant, whilst being able to self-regulate her own emotions, leads to an infant being able to learn to better self-regulate (Horenczyk et al., 2015:339; Leerkes et al., 2015:94). The participants voiced the importance of self-care for the mother in order for her to learn to self-regulate her own emotions and thereby assist the infant to self-regulate.

The personal characteristics of the mother-infant dyad will shape the nature of the interaction. Factors such as the infant's temperament and mother's personality are important personal characteristics to be considered (Mingo & Easterbrooks, 2015:471). Mothers bring their own internal working models of themselves, others and their relationships into the interaction with their infants, which affects their ability to regulate their emotions (Mingo & Easterbrooks, 2015:471). Many psychopathologies are considered to occur due to problems in emotional regulation, such as anxiety and depression, borderline personality disorder, and substance abuse in mothers, all affecting mother-infant attachment (Horenczyk et al., 2015:340).

Culture affects how the mother emotionally regulates as dyadic interaction is affected by a community's traditions and practices, and also by the context of the mother and infant's relationship to others (Mingo & Easterbrooks, 2015:472). The mother-infant dyad is one of the most simple units of the microsystem, which exists within and is affected by the environment (Guckin et al., 2013:38).

Research has discovered that dyadic interaction is shaped by context, and that in a context of trauma and political violence such as in South Africa, a mother's ability to self-regulate

and to provide co-regulation activities for her child becomes increasingly difficult (Horenczyk et al., 2015:339; Mingo & Easterbrooks, 2015:471). Knowledge on how to co-regulate is important for the mother to understand and learn to practice with her infant. This is key in the South African context where poverty, violence and political instability are serious problems as trauma exposure may lead to children having a lower tolerance of negative emotions and utilising avoidant strategies (Horenczyk et al., 2015:340). Therefore, it would be important to discuss trauma in the South African context and link it with emotional regulation of the mother and infant in the programme.

Research has affirmed that learning about emotional self-regulation is important because factors such as child abuse and neglect, due to poor emotional regulation, affect the child's socio-emotional development (Freeman, 2014:545). Child maltreatment is a very serious social issue in South African society. Emotional self and co-regulation play an important role in attachment in that mothers need to understand the importance of modelling helpful responses to stress, preventing their infant from exhibiting greater dysregulation, and rather teaching the child to monitor her own feelings (Horenczyk et al., 2015:340). A good understanding of contextual and internal factors, affecting emotional self-regulation of the mother and co-regulation with the infant, is important to consider across all cultures.

Sub-theme 7.5: Interaction between mother and infant

An infant's well-being is built on the sensitive dance of mother-infant communication, which is carried out differently in different cultures. Studies have shown that mother-infant interaction is important in all cultures, and must be observed when analysing mother-infant behaviours (Jennings, 2011:41).

When observing the interaction between mother and infant, the participants who were experts on mother-infant attachment deemed it important to track body language such as hand gestures. Experts highlighted several aspects that could be tracked to determine how the mother and infant interact with each other, as illustrated in the following quotes:

- "Or even whether there is some kind of turn taking and whether they're on the same wave length. I don't know how to put it … synchronicity. Well, yes, in terms of how well the matching of the vocalisations and the actions and the things are." Participant 63 (Expert)

- "So if it's the mother's face he recognises, you will see the behaviour, shows you clearly that he's happy to see or she's happy to see the mommy." Participant 64 (Expert)

Indicators such as tone of voice and talking should be carefully observed as a cultural pattern of communication and interaction. Some professionals explained the rationale for inclusion of this aspect in the programme as follows:

- *"*Because you know us we like shouting and shouting and we use a strong, sometime a strong language and stuff, so you should listen to the tone of the voice when relating to a child." Participant 45 (Xhosa professional)

- "If the child, like you said 'babbles' how do I respond to the child, am I communicating with the child and am I teaching the child?" Participant 42 (White professional)

- "I think at times, I think the older generation ... did not, I think from my last point that the communication part, it wasn't seen that important that a baby or a child needs to be spoken to, you need to understand where they're coming from. You can see when for instance the grandmother at that moment with the grandchildren, that they don't, at times, don't feel that it is important to listen to everything that the child is saying you know ..." Participant 51 (Xhosa professional)

- "But if it's an older baby, you can, it's the way she keeps the baby, is she talking to the child or is she really just sitting there and ... with some coloureds it's kind of funny because to them, and I don't know why but I think it's more of, you don't understand me anyway so why should I talk. But I don't think they realise the importance of talking to your baby." Participant 50 (Coloured professional)

- *"*Also, I found a lot of people are on their cell phones constantly, I think that impacts your relationship with your child very negatively. Is mom busy with other things, is she busy with her baby, or is she constantly busy with her cell phone, her tablet whatever?" Participant 32 (White professional)

Participants focused much on tone of voice, communication and physical actions when referring to the interaction between the mother and infant. Xhosa, Coloured and White professionals spoke of the importance of mother-infant interaction and communication not truly being understood and valued in these represented cultures. Technology (cell phones) was mentioned as interfering in mother-infant interactions, as well as a feeling that the infant does not sufficiently understand language for proper communication to occur.

Literature indicates mother-infant interaction to be divided into communication and play. Communication with a reciprocal give and take of signals leads to healthy attachment and is integral to forming the attachment relationship (Siegel & Hatzell, 2003:80). Contingent communication is when the signals an infant sends are received, understood and transferred accurately by the mother, leading to a sequence of communication where there is a joint collaboration between the infant and mother (Jennings, 2011:14; Siegel & Hatzell, 2003:80). Being on the same level as an infant from the beginning, by means of

collaborative communication, supports an infant to thrive (Booth & Jernberg, 2010:4; Siegel & Hatzell, 2003:80). When a baby smiles and a parent smiles back, when a baby makes a sound and a parent responds, the parent is saying that she sees her, that she will reflect the baby back to her, and accepts and values the baby as she is (Siegel & Hatzell, 2003:81). Parents have different parenting goals, practices, expectations and styles of communication based on their unique cultural backgrounds (Mckenna, 2009:18). Some cultures believe in regular communication from a young age and others believe that infants are not yet significant members of the community and do not need to be interacted with to a large extent (Keller, 2015:181).

Positive attachment is largely determined by the mother's ability to be flexible with her attention, and manage focusing on her infant at hand when interacting and talking to her infant, rather than experiencing an attention detachment or attention disorientation, as a consequence of distracting features in the environment (Pallini & Laghi, 2012:158). Cell phones, as mentioned in the above quote by a White professional, can serve as a source of distraction of the mother from her infant and obstruct mother-infant interaction.

Research has been conducted to ascertain whether there are cultural and ethnic differences with regards to the mother's state of mind, affecting her engagement with the baby. Clear links have not yet been proven but instead an argument that some attachment behaviours are universal has in many cases prevailed (Haltigan et al., 2014:1020). Research in the United States has demonstrated that African American mothers are more emotionally expressive when interacting with their babies and able to engage more than European American mothers. Therefore, dismissive and preoccupied factors might represent similar constructs across ethnicity, but could still lead to mean level differences between these factors in test results (Haltigan et al., 2014:1020).

As mentioned by Jennings (2011:67), play has proven to be beneficial for the baby when interacting by leading to the development of language, the ability to problem solve, and to be creative. Physical play is significant when engaging with the baby as it leads to stimulation and brain development, alertness and effective learning (Booth & Jernberg, 2010:4; Jennings, 2011:67).

Research has illustrated that it is significant to understand play cross-culturally (Jennings, 2011:69). Certain Gypsy cultures would not play on the floor as it is considered only fit for animals, and some Indian cultures do not believe in rough play whereas in Western cultures, many fathers show affection through physical holding and rough playing (Jennings, 2011:69). Some urban and rural mother participants, across all represented cultures, mentioned not always having time for play and engagement with the baby after returning from work, because of fatigue or having to take care of the baby's physical needs. Culture and social context are important considerations when discussing how a parent engages with her baby.

Sub-theme 7.6: The role of historical attachments

Understanding historical attachments and their impact is considered significant as historical attachments lead to the transmission of cultural values and beliefs from one generation to the next. As not all past attachments are positive, mothers may require knowledge on attachment in order to re-adjust and reframe their internal working models and their behaviours towards their infants (Lee et al., 2013:266). The professional participants felt this aspect needed attention in an attachment programme, as is evident below:

- "If I think of other African families, a very precise way of doing things with their children. But there's the correct way of doing things that is inter-generationally brought down ..." Participant 65 (Expert)
- *"*I think it's important to look at the effects of attachment into adulthood and people must understand the importance of attachment in the long-term. And not just when your baby is little. Effort must be put into continuing to bond with your child over time-lifelong attachment. Look at emotional history of parents, and at alienation that may have taken place." Participant 34 (Indian professional)

The internal working model is formed as a consequence of interactions with main attachment figures in early life, which highlights the importance of historical attachments (Booth & Jernberg, 2010:28). Internal working models can change based on new experiences with new attachment figures later in life (Zeanah et al., 2011:830). Culture is understood to be inter-generationally transmitted, and thus historical attachments have proven in research to have an impact on the transmission of attachment practices from mother to child (Bowlby, 2007:307; Keller, 2015:178). This is an important aspect as our childhood experiences affect the individual's ability to develop successful social relationships with others.

In South Africa, past inequalities took attachment figures away from their children due to trauma, migration and work, which affected the attachments parents had with their attachment figures (Adonis, 2016:2). This, in turn, has had an impact on parenting practices, norms and values which would directly affect the mother-infant relationship. A programme should therefore focus on the effects of old and current internal working models, and how they influence current attachments to the infant. Therefore, past attachments must not be forgotten as an important theme to be noted, as also mentioned by participants in this study.

Sub-theme 7.7: Individuality of infants, parenting and contexts

Participants in the samples of experts and professionals suggested that the implementation of an attachment programme should highlight and respect the individuality of infants, parenting practices and contexts. Aspects such as a mother understanding her individual infant, matching her responses and having sensitivity towards her infant, were expressed in the following views:

- "Although you know what, the literature has shown that there isn't one size fits all. That with the temperament of the baby and the temperament of the mother, that in some couples, like you might have a baby who is going to turn out to be tactile defensive. So too much touching or too much talking would be experienced as intrusive for that baby. So it's actually about helping parents, as I've said before, understanding their individual baby and matching their responses with what feels right for their individual baby." Participant 63 (Expert)

- "Parenting is so very personal and particular to individuals, and there needs to be tremendous respect and sensitivity from anyone outside trying to show or be part of this very core human behaviour." Participant 69 (Expert)

More recent studies have widened the concept of maternal sensitivity to better fit a variety of situations, as well as the unique dyadic nature of the mother-infant interaction (Miller & Commons, 2010:6; Mingo & Easterbrooks, 2015:471). Infant temperament is defined as consistent, stable individual differences in behavioural tendencies that exert influences bi-directionally on themselves and others in the social environment (Del Rosario, Gillespie-Lynch, Johnson, Sigman & Hutman, 2014:381). One distinguishes temperament constellations to do with affect (positive or negative) and sensory responses, as well as looking at behavioural inhibition (Fox, Barker, White, Suway & Pine, 2013:789). Behavioural inhibition is a temperament which is identified in infancy and is characterised by heightened motor and emotional reactions to anything new (Fox et al., 2013:789). Such infants will avoid unfamiliar objects and new situations. Behaviourally inhibited infants will engage and interact less with same age peers than those who are not inhibited. This temperament has been found to be a risk factor for social anxiety later in life, as behavioural inhibition and anxiety disorders share similar behavioural and physiological characteristics (Fox et al., 2013:789).

Parents need information where they learn to value and accept the individual differences of their children, and to steer their children towards healthy adaptive lives in early intervention programmes (Fox et al., 2013:790). In light of this research study, individual temperaments of infants and caregivers and how they may affect stranger anxiety and

proximity, had to be kept in mind. The individuality of each mother-infant dyad must be appreciated and expressed in an early intervention programme.

Some participants highlighted that mothers in different cultures may adopt certain parenting practices, such as different carrying practices of the child, to provide safety and a sense of security to babies, whereas others massage or hold babies close to them.

- *"*How I am carrying my babies and my children if you know, I always carry them in the front of my breast ... And them facing towards me." Participant 52 (Coloured professional)

- *"*Yes I do, I love carrying my baby on the back because it soothes the baby, the baby most of the time five minutes on the back the baby falls asleep." Participant 45 (Xhosa professional)

- *"*What we usually do is from a very young age, when we bath we massage the baby you know and as you massage the baby, you talk to the baby." Participant 59 (Coloured professional)

- "… our mothers and they also they do this whole thing with the baby as well you know they, you do this whole lot of Indian rituals with the baby just in terms of you know, keeping them warm and safe and you know, cuddling them and swaddling and all that sort of thing." Participant 57 (Indian professional)

One expert participant suggested that the attachment programme should include positive cultural models of parenting, as well as indigenous terms for certain concepts:

- "In a way we've done a similar thing, we've developed a home-based programme; its on-going, and I think if I were to do that again I would have spent a lot more time in the context that we were working, and I would have spent a lot of time asking the kind of questions that you're asking. Like you know what are the positive cultural models of parenting, and what are the indigenous names for some of these practices and I would have structured the programme very much more that it would have almost been derived from in the community. I mean we did do something of that but I think I would have done that even more if I was to redo our project, and I suppose that in an ideal world if you ask my advice that would be what I would do." Participant 69 (Expert)

One of the professional participants suggested that the word 'attachment' be replaced with 'bonding' as the latter is a word with which many people are more familiar.

- "I understand the word attachment, you and I understand the word attachment but normal day to day moms, they don't have the word attachment you know when they are dealing with their babies, they are

dealing with their babies with what they have and what the baby needs. And there isn't a, how can I say it? It is not necessarily a thinking mom about how this is affecting the high attachment of my child, because you don't have that knowledge but you know that you have to bond with your child, I think the word bonding is something everyone knows." Participant 44 (Indian professional)

Another professional suggested that a programme for the South African context should also focus on the role of the members of the extended family in caring for infants.

- "Look at the engagement of extended families, as this is very important." Participant 38 (Zulu professional)

It is suggested that a programme on mother-infant attachment cannot be implemented in a rigid way, but has to offer opportunities for consideration of individual or contextual differences. Caregivers are all individuals with specific temperaments, strengths and weaknesses that are partly environmental and partly genetic, and these will influence the types of interactions they have with their children (Bowlby, 2007:308).

6.3.8 Theme 8: Measurement of attachment behaviours

The suggestions from the professional participants in terms of the measurement of attachment varied with reference to behavioural variables that can be applied across a variety of cultures. The variables were applicable in the South African context, with a few variables that were recommended to be observed from a South African cultural lens. There are many Western instruments of measurement of attachment that fail to incorporate socio-cultural and contextual differences in multi-cultural societies (Tomlinson, 2001:51; Vicedo, 2017:7).

Sub-theme 8.1: Use existing tests and indicators as guidelines

The participants who were experts on mother-infant attachment suggested that the researcher should explore the use of existing tests and measurement indicators as a first step in the development of a measuring instrument for the South African context, as is evident in the following quotes:

- "I would look at the Strange Situation and try see if we could introduce a few indicators that are more appropriate for our African cultures. I would look at a securely attached African child and see what you can introduce." Participant 66 (Expert)

- "It is worth looking at Crittenden's tests, AAI, Attachment Script Assessment." Participant 68 (Expert)

- “Structure, engagement and good framework, nurture; Mimms ...” Participant 66 (Expert)

- “We’ve done video recordings of moms and babies in their homes looking at a pre and post and looking at maternal sensitivity ... and we’ve used the Ainsworth scales, I’m sure you’ve heard about her, which we’ve found to not be culturally appropriate for our context.” Participant 69 (Expert)

Parent-child interaction can be assessed by means of such formal measures as mentioned by the participants, but also by less formal measures such as naturalistically observed behaviour and narrative qualities in describing the child (Zeanah et al., 2011:823). Much research has been conducting on the effective measuring of attachment, and more recent Western measurements have been introduced such as the Infant-CARE Index and the Attachment Q Sort (AQS) (Farnfield et al., 2010:318; Minde et al., 2006:547). Existing tests such as the Strange Situation Procedure (SSP), Adult Attachment Interview (AAI), and the Still Face Procedure are applied in Western contexts (Haltigan et al., 2014:153; Zeanah et al., 2011:823).

As attachment has been found to be affected by contextual factors, some authors question the applicability of Western measurement instruments of attachment in different contexts (Tomlinson, 2001:42). As an example, the concept of stranger anxiety differs in Western and non-Western cultural contexts (Tomlinson, 2001:42; Vicedo, 2017:7). However, according to research, initial attachment is still largely considered to be innate and instinctually driven with some universal features, thus some internationally applied indicators could be relevant in a South Africa-specific measuring instrument of attachment (Bain, 2014:593; Tomlinson, 1997:109).

Sub-theme 8.2: Maternal sensitivity and responsiveness

Maternal sensitivity was also mentioned extensively by professionals and experts as an important indicator to be considered when developing a measuring instrument on attachment in South Africa. Maternally sensitive behaviours such as holding and nesting were voiced by participants as important for the baby to feel contained and whole with the mother, across all cultures. As mentioned by Jennings (2011:112), a baby that is held tight by her mother feels contained and secure.

The following quotes illustrate the importance of maternal sensitivity through the views of the professionals:

- “It’s the responsiveness; can the parent read the child’s signals and then what’s the parent’s response to that? So in terms of the responsiveness, there’s a beautiful article on responsiveness, where you know, is it an appropriate response, is there no

response, is it an inappropriate response? So what is the parent's achievement with the child, because that is really what attachment is about." Participant 65 (Expert)

- "I think it's to try and make meaning of what the child is saying or vocalising or showing or doing. I think it's really to try and help the parent to have an idea of what's in their baby's mind. What's going on? What they might be thinking, what they might be feeling when they show certain behaviours." Participant 63 (Expert)

- *"*I think you should look at the emotional bonding, how mom reacts when baby cries, does mom pick up baby, does mom calm baby? Does mom spend time with the baby? Some parents do not want to spend time with their children, they just let them lie there ..." Participant 32 (White professional)

- *"*If you look at parents with their kids, you will definitely see who is more comfortable; who is more at ease ... So I mean if you look at the relationship between the mom and the baby, either from the mom's side and from the baby's side, the way they hold the baby, I mean that's very important, you'll definitely look at the way the baby is held." Participant 59 (Coloured professional)

- "How well nested is the child with the mom, how comfortable is the child in the mom's arms?" Participant 64 (Expert)

- "Maternal sensitivity ... sensitive responsiveness. That really is: does the baby signal, the baby's attachment behaviour signals, are they received by the parent and is parent able to respond appropriately? I think that maternal sensitivity is a precursor to the insecurity of attachment. If there is repetition um over a period of time of sensitive responsiveness, you would probably get a security of attachment and I imagine you could measure that by brief separations and reunions. Um and how does baby manage the stress of separation - I guess I'm talking the strange situation really - and then is baby really able to get back to playing once the attachment figure has returned." Participant 69 (Expert)

- "Insightfulness, parent's attunement, parent's connection, is the physical availability there, are they hearing their child, are they able to connect?" Participant 67 (Expert)

- *"*They should be able to sit and crawl - how is mom reacting when the baby is very busy, what is mom doing? Is it irritating her?" Participant 32 (White professional)

Keeping in mind that an infant is kept safe and contained in the womb for nine months, after birth the infant now needs to feel safe in the outside world. A sense of security is provided by means of interacting, nesting and holding and promoting a circle of containment, care and attachment between mother and infant (Jennings, 2011:112; Kennedy et al., 2014:288).

The most basic need of an infant is to be physically attached to its mother (Bernier et al., 2015:1853; Jennings, 2011:104). Infants are frightened of being left alone, specifically at night and require not only being wrapped up but also their mothers' company when being held tight (Jennings, 2011:104). Co-sleeping has thus been found to be beneficial in the early stages of development for these reasons as it encourages sensitivity and responsiveness, but is not carried out in all cultures. In England, more of a focus lies on the couple than the child-mother relationship in sleeping arrangements (Arnett, 2016:136-137; Jennings, 2011:104). As mentioned by many of the African, Coloured and Indian participants, co-sleeping is a common practice in many South African cultures. Physical contact affects the infant's brain and social development and is enhanced during co-sleeping.

Research has confirmed that infants who are abandoned or removed from the warmth and comfort of their mothers become depressed or fearful (Jennings, 2011:106). Full time emotional closeness and holding can be difficult on the mother as she is initially in pain after childbirth, and thus emotional support for the mother and infant is important (Jennings, 2011:106). The mother needs to be supported in order to foster a circle of containment and trust while initially loving and engaging with her infant.

Research has illustrated that socio-cultural contextual factors influence maternal attitudes and emotions towards interaction, holding and emotional connectedness (Robinson, 2007:25; Vicedo, 2017:9). Maternal behaviours that indicate sensitivity and responsiveness towards the infant as mentioned by the participants are: vocalising, understanding the baby, emotional bonding, the mother's reaction to a crying baby, comfortability, holding, appropriate response, insightfulness and spending time with the infant (Chetwin, 2010:18; Mingo & Easterbrooks, 2015:471). Ethnographic studies carried out in the slums of Brazil, where infant mortality rates are particularly high with the average woman having nine pregnancies, eight births and three infant deaths, have proven that these mothers do not immediately personalise their infants by giving them a name nor becoming too emotionally attached and mourning their death, as is practiced in Western cultures (Vicedo, 2017:9). Socio-cultural contexts thus influence parental views towards socio-emotional involvement with infants (Vicedo, 2017:10). This factor is an important consideration in the South African context, as many African mothers living in informal settlements experience high infant mortality rates, which affects their ability to become emotionally connected to their infant babies in a manner that is adequately sensitive (Aspoas & Amod, 2014:583; Bain, 2014:593; Tomlinson et al., 2005:1044).

It has been found that babies are held and comforted differently in different cultures (Jennings, 2011:104). Despite these differences, the literature on attachment identifies certain behaviours that are characteristic of sensitive care. These behaviours include holding, parental warmth, emotional connectedness, containing the baby, nesting and interaction with the baby (Robinson, 2007:25). Maternal sensitivity and responsiveness is therefore an important indicator utilised to measure attachment behaviours.

Sub-theme 8.3: Tracking of the baby

When observing maternal attachment behaviours, it is important to watch how the mother tracks her infant. According to the participants who were experts on mother-infant attachment, the attention the mother gives her baby by tracking her child must be considered, as is illustrated in the following quotes:

- "I think you've got to look at tracking. Whether there's some sort of (tracking) … Or even whether there is some kind of turn taking and whether they're on the same wave length." Participant 63 (Expert)

- "Tracking and the baby, and the baby actually tracking the mother, it's that end worth typical thing of, do they track each other?" Participant 65 (Expert)

- "And when she's with the baby and she's having contact with somebody else in the room, so whether it's a therapist or not and she asks a question, what does she do with the child?" Participant 64 (Expert)

In the modern day, as has arisen in the professional participant interviews, factors such as technology affect the attention span and accurate tracking of the baby, as is mentioned in the following quote:

- "I see a lot of parents struggle nowadays with availability. I mean I would do an interactional analysis with some of these parents and they would have their phones on the side and quickly send an email so that's quite problematic." Participant 66 (White expert)

Studies have found that attention is an important factor when considering the tracking of an infant (Pallini & Laghi, 2012:158). Flexibility of attention was found to lead to more secure attachment between the mother and infant. The unique interpersonal relationship between the mother and infant will determine the attention given by the mother to the infant while tracking and involves temperamental and cognitive factors that are also individually determined, not only culturally based (Pallini & Laghi, 2012:158).

Studies have demonstrated the importance of the mother's tracking of infant behaviour and following the cues the infant transmits by listening to and watching the infant with an open mind (Siegel & Hatzell, 2003:81). Research has found that an infant's movements and the type of bids that an infant makes, predicts the mother's responses and her tracking behaviour (Karasik, Tamis Le-Monda & Adolph, 2014:388). Mothers of walking babies respond with action directives more often than mothers of crawling babies (Karasik et al., 2014:388). It was also found that walkers and crawlers have different types of bids to the mother in that walkers engage in moving bids and crawlers in sharing objects with their mother from a set position behaviour (Karasik et al., 2014:388). These bids influence the mother's tracking behaviour. Such factors must be taken into account when observing the

tracking of the baby. Tracking behaviour is an important aspect of secure base dynamics, as the mother supports the infant when exploring, and welcomes the infant when returning to the mother (Cooper et al., 2002:111).

The participants furthermore referred to the importance of eye contact between the mother and infant. This is an important indicator when measuring attachment behaviours.

Sub-theme 8.4: Eye contact

The expert participants indicated that eye contact is a variable that cannot be disregarded in measuring attachment, but for which one must apply variance within South Africa cultures, as is illustrated in the following quotes:

- "Well I think you've got to look at eye contact. I think you've got to look at localisation." Participant 63 (Expert)
- "How comfortable the mom is and how well the mom makes eye contact with the baby." Participant 64 (Expert)
- "Eye-contact. Not always highly prioritised in African cultures so have to check this one." Participant 66 (Expert)

This indicator was voiced as important by the professional participants as is illustrated in the following quotes:

- "Eye contact is very important to look at." Participant 38 (Zulu professional)
- "I think you should look at eye contact, the position the baby is sitting in." Participant 35 (Xhosa professional)
- "I believed in eye contact, it is valued in our culture, physical contact." Participant 44 (Indian professional)
- "No, with eye contact we normally teach our children that you know, if you want to tell the truth you need to have eye contact because if you do not look at me when you're talking it means there is some doubt on what you're saying." Participant 58 (Indian professional)

In contrast to the emphasis on eye contact by some participants, some of the Zulu and Xhosa participants expressed that parents, especially in the rural areas, do not always look their children in the eyes nor display much facial expression in order to remain stoic and maintain a divide between the parent and child. However, there appeared to be a difference between rural and non-rural individuals. The Zulu and Xhosa professional participants explained that this is a fact only later on in childhood and not during infancy, and is no

longer as common in modern urbanised environments, as is demonstrated in the following quotes:

- "In terms of eye contact we give it, it's not like that anymore. We are more Westernised and believe our children should look at us and communicate." Participant 35 (Xhosa professional)

- "They do believe in eye contact being disrespectful like I said when the children are at the teenage stage. … Not as babies but when they start growing up and seeing what parents do as, things that are, are not respectful if I may say. Or the way they speak to them, all those things you know." Participant 39 (Zulu professional)

- "I think it is when the child is older and it's still considered (disrespectful), they do make eye contact when it's during the infancy period because I think it's still that relationship building that I've identified that they still do look, make very good eye contact with the baby at the moment because that's when they feel that their child is bonding with them ..." Participant 51 (Xhosa professional)

- "It's not something that I've thought about but between a mom and a child at that particular stage in life ... It's fine, the eye contact issue becomes a thing later on ... not when mom and baby still need each other so much." Participant 61 (Zulu professional)

A Coloured mother participant mentioned the following:

- "… we do believe in eye contact because that's the sign that you are listening and paying attention to what is said to you." Participant 27 (Coloured mother)

Most Western international measures use eye contact as one of the first indicators of mother-infant attachment (Tomlinson, 1997:119). Research has indicated that effective attachment practices involve some degree of eye contact (Levy & Orlans, 2014:16; Miller & Commons, 2010:1). Practices such as holding, breastfeeding, response to crying, co-sleeping and carrying for long periods involve eye contact. Studies have been conducted on eye contact with one- to two-month-old infants who were put on the floor in an infant seat and could only see what was on the floor in front of them. When the researcher walked behind the infant the infant began to cry and when the researcher reappeared, the crying stopped (Nelson, 2005:44). Further research has been carried out by watching the infant interaction with the father (Nelson, 2005:44). The father was studied looking at the infant and then looking away from the infant, which made the infant distressed, cry and begin to self-soothe by looking at her hands. When the father re-engaged with the infant, the crying stopped,

showing the importance of eye contact as part of the engagement (Nelson, 2005:44). Therefore, eye contact and gazing are soothing for an infant and leads to intimacy.
Reading non-verbal cues with eye contact in order to understand the emotions of others is integral to daily social interactions from infancy onwards, and is essential for normal social development (Rodger, Vizioli, Ouyang & Caldara, 2015:926). Infant gazing leads to facial recognition of emotion which has been found to improve with age, except for the recognition of happiness and fear for which happiness is most easily recognised from the youngest age, and fear more difficult to recognise (Rodger et al., 2015:927). Research has found that recognising and reading facial expression at age five leads to heightened social and academic competence later in life (Rodger et al., 2015:926). Thus, the importance of eye contact to read facial expression has been found to be an integral social skill to be developed, which cannot occur without the child's consistent exposure to regular eye contact from infancy onwards (Cozolino, 2010: 185-186).

The language of the eyes providing important information about the environment and emotions can only be learned by the infant by means of eye contact (Cozolino, 2010:185-186). Imitation is important in the first stages of development leading to the child learning new ways to behave and react based on the mother's behaviours, which cannot be adequately achieved without eye contact (Holmes & Slade, 2018:26; Jennings, 2011:104). From the beginning, collaborative communication by means of eye contact is required in order to make the infant feel acknowledged, recognised and loved (Siegel & Hatzell, 2003:80). Thus, emotional synchronicity which is facilitated through eye contact between the mother and infant is important for effective imitation, learning and bonding to occur.

Eye contact is therefore considered an integral part of communication with an infant facilitating more secure attachment, and is an important indicator to be considered in the measuring instrument. Eye contact must, however, be applied with some degree of variance as it can be perceived as a sign of disrespect in some African and Aboriginal cultures (Mckenna, 2009:18-19; Siegel & Hatzell, 2003:80).

Sub-theme 8.5: Touching and holding the infant

It is important to consider the importance of touch in enhancing positive attachment between mother and baby, as is demonstrated in the following quotes by the professional participants:

- "The quality I would measure according to, does mom just hold baby or does she rub the baby ... Generally, you can see by touch. So, if a mom touches the baby and the way the mom touches the baby and how the baby responds to mom's touch. If a baby snuggles into mom..." Participant 64 (Expert)
- "Look at holding the baby, hugging the baby, and playing with the baby …" Participant 44 (Indian professional)

- *"*Closeness or physical touch." Participant 66 (Expert)

Research has illustrated the importance of physical touch where a baby needs to be physically attached to their mother or caregiver (Jennings, 2011:104; Levy & Orlans, 2014:16). The experiments run by Harry Harlow are significant, as they demonstrate the importance of physical clinging, nurturing and touch for the baby onto the mother (Jennings, 2011:104; Keller, 2015:176). Physical clinging and touch also lead to a sense of safety for the child and facilitate secure attachment (Levy & Orlans, 2014:16).

Research has confirmed that tactile stimulation (across cultures) is also considered important for neurological and brain development (Booth & Lindaman, 2010:62; Jennings, 2011:104). Playful interactions involving physical touch between parent and infant can create changes in the brain leading to more enhanced regulation of affect, as well as balanced and long-term mental health (Booth & Lindaman, 2010:62; Levy & Orlans, 2014:16).

Carrying the baby on the back is considered a form of positive bonding between mother and baby in most African cultures. Carrying and holding a baby is often perceived as a way of calming the baby (Mawani., 2002:17). In other cultures, babies are carried in slings as a specific practice through which to soothe infants (Mawani., 2002:17, Jennings, 2011:104).

Infant massage is practiced across cultures, starting in some cultures after birth immediately after the umblical cord is cut (Jennings, 2011:104). Infant massage has been found in research to be integral in promoting weight gain, improved circulation, digestion and promoting growth of the frontal lobe of the brain and is also found to lead to babies being more content, sleep better and cry less (Jennings, 2011:104). As indicated in the theme of caregiving practices earlier in this chapter, the expression of touch appeared to be different across cultures, where massage was significant in Indian cultures as mentioned by the mother participants. Physical expression of love by holding, hugging and kissing was important by the White, Coloured and Black participants. Carrying the baby on the back was important as mentioned by the professional and traditional African mother participants.

In the highly technological world of today, it is crucial to remember that an infant needs contact. Human contact is the foundation of attachment and this indicator should be observed closely in any scale that measures attachment behaviour (Jennings, 2011:104; Smith et al., 2011:113).

Sub-theme 8.6: Soothing the infant

Attachment behaviours by means of emotional connectedness, comforting and soothing, lead to the development of brain systems involved in affect and self-regulation (Booth & Lindaman, 2010:63). When the mother soothes the baby, important sensory stimulation

occurs that leads to the development of the infant's emotional abilities (Booth & Lindaman, 2010:63).

The importance of observing the soothing of the infant across cultures is illustrated in the views of the expert and professional sample:

- "Well, one of the biggest indicators that I used was (the infant's) comfort level with mom … When they cry and what is interesting to see is, does mom soothe, doesn't mom soothe?" Participant 64 (Expert)
- "Is the baby looking anxious or is the baby looking at ease and comforted? Watch the babies' reaction when they see mommy. That is a big indication." Participant 44 (Indian professional)

Research has demonstrated the importance of mother regulating her own emotions and that of her baby (Horenczyk et al.; Leerkes, et al., 2015:94). Soothing, by means of reacting to a baby's crying, is affected by biology and hormones, and by culture, personal experience and conscious decisions (Levy & Orlans, 2014:62; Nelson, 2005:47). Soothing and comforting a baby are of the utmost importance according to research on attachment (Booth & Lindaman, 2010:63).

In research studies it has been discovered that when babies cry with a low pitch at three weeks of age, it is often considered to be 'faking' instead of the baby having a need for bonding and physical contact (Nelson, 2005:47). Mothers who take time to respond in this instance are not necessarily considered insensitive but rather informed by culture as to how to react. This was often found to be the perception of the Black, Coloured, Indian and White mother participants in this study. The mother participants across cultures in this study spoke of crying for physical needs such as hunger and pain to be considered legitimate, but crying for emotional needs (a voice, a cuddle or contact) was often perceived as a form of manipulation by the baby. These participants felt there should be no crying for no reason. Showing care by appropriate, gentle reactions when soothing and reacting to crying has been found to be culturally based (Nelson, 2005:48). When to soothe and for how long is often determined by cultural views, despite initial attachment having a biological basis (Nelson, 2005:48).

Further research has concluded that it is essential for the mother to soothe her infant (Jennings, 2011:107; Martorell et al., 2014: 219). Medical professionals in clinics ensure that the baby is given to the mother to soothe and hold as soon as possible after birth (Jennings, 2011:107).

Sub-theme 8.7: Infant proximity and separation anxiety

In observation of attachment behaviours, the expert and professional participants voiced the importance of observing whether the infant stays close to the mother and reaches out

to her, or whether she does not seek close proximity to her mother. The mother's behaviour in terms of proximity and separation to and from her infant, should also be closely observed. The participant's views on proximity and separation anxiety follow:

- "Does the mother prioritise closeness, control, obedience, separate, awareness etcetera. We look at the baby seeking proximity, we even look at whether the baby's hands are open or closed and reaching out." Participant 66 (Expert)
- *"*Proximity, and how the parent behaves with the child." Participant 35 (Xhosa professional)

In some families, however, what might seem to be excessive focus on proximity may be based on a cultural requirement.

- *"*There is an assumption that you are a good mom if your baby is clinging to you, I don't see that as healthy attachment myself but there is this idea that you are a wonderful mom if your baby just needs you all the time … Strange environment yes, so there is a lot of that happening ... They say in the first few years of the child's like there is definitely a very dependent relationship between mother and child." Participant 44 (Indian professional)
- *"*Look at child feeding, separations and reunions. Many Indian communities … the children are less encouraged to explore the world. Anxious attachment can then be perceived as a child who is well attached and there is a dependence on their parents." Participant 34 (Indian professional)
- "I think that depends on the family. You do get some families where children are not really sociable because they have been isolated and they've been protected, not sheltered so much, where the other families it's different, they are more open and sociable and because they socialise the child learns at a young age to be that way ..." Participant 58 (Indian professional)

Research has found the importance of a balance in the infant seeking proximity to mother whilst feeling confident to explore the environment (Felton & Jowett, 2013:619). The quality of this process is determined by the responsiveness of the mother and cultural factors that affect the attachment style of the infant and mother (Blanchard & Lyons, 2016:570; Stevens, 2014:124). In terms of measuring attachment behaviours, one should observe whether the infant returns to the mother when displaying insecure or unsure feelings, and then returns to the environment when feeling safe once again; whether there is a balance between proximity and exploration for the infant; and whether the mother responds warmly, encouraging adequate exploration when the need is expressed by the infant (Farnfield et al., 2010:319-320).

As a consequence of full or part-time day-care due to increased economic demands of today's world in which many parents are both working, a better understanding of the parent-infant separation process, due to the use of formal childcare is needed (Jovanovic, 2011:248). Parents and professionals need to continue to learn how best to deal with separation anxiety in a way that minimises both the parent's and the infant's distress levels (Jovanovic, 2011:249). Such an understanding would lead to improved health and well-being of both parents and infants across the world, and assist professionals in measuring separation anxiety levels more effectively.

The development of stranger fear is believed to be adaptive and as a result of individual temperament, also an individual's characteristic reactions to a stranger, which is a marker of behavioural inhibition (Brooker, Buss, Lemery-Chalfant, Aksan, Davidson & Hill, 2013:865). There have been some findings in research on stranger anxiety that may assist in identifying an early risk of anxiety problems (Brooker et al., 2013:865). Further multiple measures have demonstrated that stable patterns of fearfulness of separation over time are stronger predictors of anxiety problems than single measures (Brooker et al., 2013:865).

Different cultures affect how the baby copes with proximity differently based on their exposure to their mother as their caregiver (Keller, 2015:184). It is important to consider cultural differences with regards to stranger anxiety, most particularly in multiple caregiving arrangements (Keller, 2015:184; Vicedo, 2017:12). In these societies, multiple caregivers are continuously involved in the raising of infants to a degree where separation anxiety is neither as intense nor apparent as would be in a Western middle-class context, where the infant is usually raised by a single caregiver (Keller, 2015:184). Multiple caregiving is a common factor in South Africa leading to the possibility of stranger fear or anxiety not being as intense (Tomlinson, 1997:117). Therefore, proximity and separation anxiety as an indicator must be applied with variance and cultural sensitivity in a scale measuring attachment behaviours in a South African context.

6.4 DISCUSSION

Participants across all three samples, namely mothers, experts and professionals, expressed the importance of sensitivity and showing care as an innate, instinctual drive when caring for an infant despite cultural origins, traditions and goals.

Much literature supports this view stating that attachment begins with a biological, internal drive to bond with one's infant before a particular culture's perceptions, values and goals begin to have an influence on behaviour (Bain, 2014:593; Jennings, 2011:104; Vicedo, 2017:3). In this study, the expression of care, however, appeared to be different across Xhosa, Sotho, Zulu, Coloured and White cultures. Most African, Coloured and Indian mother participants spoke of sleeping in the same bed as their babies, whilst White mother participants spoke of having their babies sleep in their cots and prams sooner. Rural Black African mother participants in the Zulu, Xhosa and Sotho cultures spoke of carrying their

babies on their backs while working, whilst urban white mothers spoke of having their babies in day-care and placed more of an emphasis on play, stimulation and emotional interaction, as important forms of showing care. Adverse social factors also were mentioned to affect maternal sensitivity by the Coloured and Zulu mothers and affect the amount of time a mother has to spend with her baby.

The participants spoke of the mother as the person most likely to be the attachment figure across most White, Coloured, Black and Indian cultures, with the baby taking on the mother's culture in most cases where the mother is unmarried. The role of the extended family was voiced as paramount in child rearing for Black, Coloured and Indian cultures, by all three sample groups. Black African and Indian mothers spoke of relying heavily on the help from an elderly woman in the community, usually their mothers or mothers-in-law in the first few months after birth. It was mentioned that the role of extended family continues to be of utmost importance throughout the child's life, most particularly through childhood in the African Zulu, Xhosa and Sotho cultures. As indicated by White mother participants, the role of the extended family seems to dissipate in the White cultures over time, where the focus is more on the nuclear family in child raising. The involvement of the extended family was mentioned by the participants in the samples of experts and professionals, as well as the mother participants. Research has shown the important role of the extended family, and challenged the universal claims of classic attachment theory's focus on the mother-infant dyad (Keller, 2015:183; Vicedo, 2017:11).

Westernisation and acculturation proved to be strong themes for all three samples, having an influence in varying levels. Most of the urban mother participants across Black, Coloured, Indian and White cultures found it difficult to pinpoint the influence of their own culture and spoke of their parenting practices, namely holding, breastfeeding, bathing their babies based on input from the antenatal clinics alongside the use of technology. Even the rural participants and those urban participants who sent their children to be raised by their grandmothers in rural areas, relied on information from Western contexts at times, and seemed to acculturate with Western cultures. The professional Zulu and Xhosa participants also mentioned the effects of urbanisation and acculturation, speaking of how mothering practices are no longer as culturally specific in urban areas but only more traditional in rural areas. The advent of modernisation and technology seems to have led to a questioning attitude towards parenting behaviours in the past, and doubt about conducting traditional African rituals. The expert participants found it difficult to focus on specific cultural practices in different cultures and often stated the importance of recognising the culturally diverse society in South Africa. The cultural mixture and influence of domestic assistance in child-raising for many White South Africans was mentioned by the expert sample. The expert participants also mentioned the inverse case where domestic workers learn child-rearing ideas from White cultures, and how this work experience has an influence on them living in White homes. The mixture and blending of cultures have been found in research to be

occurring globally with the advent of migration and modernisation (Teske & Nelson, 2006:352).

The professional participants mentioned the influence of the West particularly in the role of fathers slowly moving away from traditional sex roles, specifically in Black African, Coloured, and Indian cultures. The participants spoke of fathers becoming more involved in general child care practices such as nappy changing, feeding and bathing from the birth of the infant. The role of fathers was also mentioned by the experts and mother participants. Literature studies have confirmed that father involvement is increasing in more recent times, but still more restricted to a practical role (Smith et al., 2011:134-135).

Emotional needs of the infant were voiced as important by the mother participants across White, Black, Indian and Coloured cultures. However, taking good care seemed to more commonly be rated as keeping the baby clean, well fed and healthy in most Black African cultures. For mostly Black African cultures, the physical needs of the baby were prioritised over the emotional needs. White and Indian cultures spoke of focusing on the holistic needs of the baby including emotional needs, sensitive parenting, as well as the mental stimulation of the baby being a priority. The need to learn about and truly understand the importance of sensitive attuned parenting across all cultures was stressed by both the expert and professional participants. Mother-infant emotional self and co-regulation was also mentioned by expert professionals as an important concept to be understood, despite cultural background.

From the participants' responses, it became apparent that the more affluent the mother, despite the culture, the more the needs of the infant were viewed more holistically to include more sensitive child rearing practices and an emotional connection. There was more quality time to indulge in these higher order needs of the baby, looking beyond only the physical needs. This difference has been found around the world where caregiver infant exclusivity is affordable for the more affluent mother. Such a mother has plentiful resources available and therefore more time to connect with her baby (Keller, 2015:183).

Participants from both expert and professional samples mentioned White and Indian cultures to rather encourage less autonomy at an early stage of development, prioritising nurture over autonomous development. Participants from Black cultures mentioned the importance of encouraging autonomy in child rearing. This belief appeared to have an impact on the response to the infant's signals. Cultural beliefs, norms and values have been found to have a profound impact on child rearing practices, sometimes overriding a biological instinct for attachment (Vicedo, 2017:11).

The White, Indian, Sotho, Xhosa and Coloured participants seemed to value and enjoy play, however, there was a marked difference between the urban and rural approach to the practice of play. Black participants from the rural areas spoke of prioritising domestic activities and work, but participants from the urban areas spent more time engaging in

more sophisticated, stimulating play activities with their babies, specifically in White cultures. Play was not always mentioned as a priority amongst Zulu professionals and Zulu mother participants from both urban and rural areas. Socio-economic circumstances and culture impact on time, energy and emotional presence of the parent and affect the quality of play (Booth & Jernberg, 2010:6).

Adverse conditions in the South African context were also mentioned by expert, professional and mother participants, proving to be an obstruction to positive attachment and parenting practices. Research has found the socio-economic context to influence maternal attitudes and emotions in relation to their caregiving practices (Keller, 2015:180; Martorell et al., 2014:245; Vicedo, 2017:9). Coloured mother participants voiced their family's priority always being on work, earning an income and practical needs rather than their children. In their childhoods, they stated that that their parents were often working and unavailable for them as children, and that they were raised in groups by a family member. The Coloured mother participants spoke of the emotional attachment and connection with one's child not being a valued priority in their communities. The negative influence of social and economic problems, such as alcohol and substance abuse, was mentioned to affect the quality of parenting and mother-infant attachment in impoverished Coloured and Black African communities. This point has been demonstrated very clearly in research conducted in the impoverished South African settlements of Alexandra, Gauteng and Khayelitsha, Western Cape (Bain, 2014:593; Tomlinson et al., 2005:1045).

There were numerous suggestions made by the professional and expert participants with regards to the attachment-based programme. They stated the importance of the programme teaching basic knowledge on attachment, as even mothers living in Western contexts have a lack of a true understanding of the meaning of basic attachment concepts. These participants mentioned discussing the importance of responsiveness and maternal sensitivity, as precursors to secure attachment. Maternal self-regulation was also mentioned by the professionals and experts to teach the mothers how to self-regulate when faced with psychosocial adversities, and in turn co-regulate emotions better with their infants. This ability of the mother to co-regulate emotion effectively with the infant leads to the formation of secure attachment. A deeper understanding of self in light of learning about the effects of historical attachments on mother-infant attachments was highlighted as an important topic for a programme. Participants in the samples of professionals and experts mentioned teaching parenting skills and styles as significant for mothers to understand, so as to be aware of their behaviours and develop skills to interact with their infants more effectively. The individuality of infants, parenting and contexts was also stressed as significant in order to take note of the mother's characteristics and infant's temperament and learn to appreciate individual, contextual and parenting differences of each mother-infant dyad.

In terms of the measuring instrument, participants of both expert and professional samples spoke of the importance of observing the synchronicity between mother and infant and their behaviour towards each other. The professionals mentioned that indicators such as holding, tracking, eye contact, touching, soothing, talking, proximity, mother-infant orientation and separation anxiety should be utilised in a measuring instrument. A number of culturally distinct behaviours with regards to the above-mentioned indicators were mentioned by the participants. The promotion of dependent or independent behaviours by the mother participants which varied between African, Coloured, Indian and White cultures, were mentioned as culturally distinct. Other culturally distinct behaviours were mentioned to be the reaction to crying, sometimes perceived as spoiling behaviour mentioned by White, Coloured, Indian and Black cultures; communication and listening to infants which varied based on participants from rural versus urban settings; play with the infant which also varied based on socio-cultural and economic factors; and the use of technology due to Westernisation and urbanisation leading to higher levels of caregiver attention distractibility. These behaviours therefore need to be measured with cultural sensitivity as indicators in a measuring instrument.

6.5 SUMMARY

Attachment theory supports the notion that attachment is an instinctual, innate and universal drive between a mother and her infant, for all cultures. Maternal attachment behaviours and their expressions are, however, influenced by cultural, social and environmental factors. The qualitative research findings as described in this Chapter, provide affirmation of both of these aspects; referring to the role of nature as well as the influence of the socio-cultural context on attachment. An attachment-based programme and measuring instrument developed in a South African context should therefore consider socio-cultural contextual factors that affect sensitive care and bonding and influence the quality of mother-infant behaviours.

In the next chapter, the themes and sub-themes that arose from the interviews with the participants in phase 1 of this study, will be discussed in relation to the development of the attachment-based parenting programme and measuring instrument for the purposes of the study. Information presented in the literature review (Chapters 3 and 4) and the theoretical frameworks for the study (Chapter 2) would also form a background to the development of the programme and measuring instrument.

CHAPTER 7

DEVELOPMENT OF THE ATTACHMENT-BASED PARENTING PROGRAMME AND MEASURING INSTRUMENT

7.1 INTRODUCTION

In this chapter, the attachment-based parenting programme that was developed by the researcher will be described. Furthermore, the development of the scale for the observation of maternal attachment behaviours which was used in the study will be described. Information on the ecological systems and attachment theories, as described in Chapter 2, the literature review on attachment theory (Chapter 3), and attachment programmes and measurement of attachment (Chapter 4), and the empirical findings on participants' perceptions on the influence of culture on attachment (Chapter 6) serve as background to the discussion in this chapter.

The content of this chapter relates to objectives three and four of the study. Objective 3 stipulates the development of a parenting programme to enhance maternal attachment behaviours that support secure attachment with consideration of the South African socio-cultural context, and Objective 4 indicates the development of an observation scale for maternal attachment behaviour.

The research questions addressed in this chapter are:

- What elements should be included in a parenting programme to enhance maternal attachment behaviours within a diverse socio-cultural context?
- What is the influence of socio-cultural factors on the measurement of attachment?

As indicated in the ecological systems theory, the development of the child is influenced by the context in which she grows up (Algood et al., 2013:133). This principle is evident in the results of various studies showing that contextual factors can have a marked influence on caregivers' attachment behaviours, as will be discussed in this chapter.

The focus of this study is on the possible effects of the South African socio-cultural context on mother-infant attachment behaviours. Information on the potential influence of culture on attachment will therefore firstly be discussed as a background to the description of the development of an attachment-based programme and measuring instrument for maternal attachment behaviours. A brief overview of the South African socio-economic context will also be provided in this chapter, since research indicates that socio-economic factors also have a significant influence on attachment behaviours (Bain, 2014; Cooper et al., 2009; Tomlinson et al., 2015).

7.2 THE POTENTIAL INFLUENCE OF CULTURE ON ATTACHMENT

The discussion of the programme and measuring instrument will be introduced with an overview of studies on possible ways in which culture can affect mother-infant attachment behaviours and the measuring of these behaviours. As discussed in the literature review in Chapter 3, attachment theory was initially put forward by John Bowlby as a universal theory of human development applied to all humans in all socio-cultural contexts and times (Robinson, 2007:24). Research has, however, confirmed that the quality and type of attachment is impacted by parenting practices that dominate in a particular culture (Robinson, 2007:25).

Culture is defined as a specific set of meanings or mental schemata (images) that is shared by a group of people or a recognisable segment of the population (Garcia Coll & Magnuson, 2000:97). These different meanings are learned, shared and transmitted from one generation to the next within a population. Culture is given power by values and beliefs that are put into action by means of daily interactions with people in the community (Garcia Coll & Magnuson, 2000:97; Louw et al., 2014:13; Mckenna, 2009:26).

Research studies indicate that the quality of attachment behaviours are influenced by specific child rearing patterns that dominate in a particular culture (Garcia Coll & Magnuson, 2000:99-100; Louw et al., 2014:13; Robinson, 2007:25). Although cross-cultural researchers have found that a worldwide set of attachment behaviours may exist amongst infants across many cultures, the selection, shaping and interpretation of these behaviours seem to be culturally determined (Robinson, 2007:25).

The transmission of attachment styles from one generation to the next has been linked to child-rearing practices that are culturally driven, and by contextual factors, such as communal sleeping. These child rearing practices may have a stronger impact on attachment than the parent's attachment representations and sensitive responsiveness (Keller, 2015:177; Martorell et al., 2014:233; Van Ijzendoorn & Sagi-Schwartz, 2008:892).

However, as indicated in the concept of the chronosystem in the ecological systems theory, the contextual layers in society do not remain static, but change over time (Guckin et al., 2013:39). In this regard, adherence to one's culture might be affected by the process of acculturation. **Acculturation** is defined as the extent to which an individual maintains his/her culture of origin or adapts to a new society's culture (Garcia Coll & Magnuson, 2000:97). Certain processes have an impact on acculturation, such as urbanisation and exposure to media (Polek, 2007:5). It is important to bear in mind that acculturation is linked to the chronosystem in the ecological systems theory, in which changes in the environment impact culture and affect mother-infant dyad behaviours.

All over the world, culture is an important contextual factor that potentially affects infant attachment (Rothbaum et al., 2002:328). Studies in different parts of the world provide examples of culturally-based parenting practices that could influence mother-infant attachment. Examples of these studies will be discussed subsequently.

7.2.1 Diverse socio-cultural practices with regard to mother-infant attachment

Culture has been found to strongly impact the attachment behaviours of both mothers and infants (Rothbaum et al., 2002:328; Tomlinson et al., 2005:1044). Based on research studies on the influence of culture on attachment, it is proposed that cultural beliefs are translated into child-rearing patterns that will have an effect on mother-infant attachment and will also affect the interpretation of mother-infant attachment behaviours in the measurement of attachment (Robinson, 2007:26-27). The statement by Sigelman and Rider (2009:416) that the "cultural context in which caregiver and baby interact also colours their relationship" is in support of ecological systems theory that emphasises the influence of the different layers in the environment on children's development (Mc Guckin & Minton, 2014:39).

An overview of the literature shows that studies on the influence of culture on attachment highlight aspects such as multiple caregiving, the influence of culture on socialisation of children, responsiveness to infant cues, and sleeping arrangements. As indicated in the discussion below, these variations are often discussed in terms of Western versus non-Western cultures and/or developed countries versus developing countries.

In the Western world context, infants are raised in nuclear families with their mother as their main caregiver with whom they spend most of their time (Arnett, 2016:175). In these countries, infants have been found to attach to one caregiver when healthy development has occurred with no obstruction in mother-infant interaction (Arnett, 2016:219; Van Ijzendoorn & Sagi-Schwartz, 2008:882). Amongst Western societies, it has been found that about 60% of infants are raised solely by one main caregiver and are found to be securely attached, while 40% are insecurely attached. In stressful, traumatic circumstances, such secure infants settle more easily (Van Ijzendoorn & Sagi-Schwartz, 2008:882). Keller (2015:183) asserts that attachment behaviours according to Euro-American middle-class culture commonly focus on the mother and infant; however, multiple caregiving arrangements are the norm in many non-Western contexts.

In non-Western countries, the focus is more often on a collectivist culture where infants are taken care of by a few mother figures in their communities and raised to function independently and socially within their unique cultures (Arnett, 2016:175). A collectivist culture is one in which decisions are made in a group and the community works together to sustain itself (Garcia Coll & Magnuson, 2000:103). In **multiple caregiving** societies, children grow up in a group and the needs of the group are the priority, such as in traditional African cultures (Garcia Coll & Magnuson, 2000:98-99; Louw et al., 2014:14; Polek, 2007:14). In Sub-

Saharan African cultures and in India, exclusive mothering has been found to be an exception because these cultures employ a social relational model where the infant is embedded in multiple, complex social networks from conception onwards (Keller, 2015:182-83). Various studies on caregiving practices point to the prevalence of multiple caregiving on the African continent.

Studies in Kenya of the Gusii people have shown a number of differences between collectivist and Western countries, such as mothers sharing their child rearing tasks with other caregivers on a larger scale, even having older siblings take care of their younger siblings through the day (Miller & Commons, 2010:3; Van Ijzendoorn & Sagi-Schwartz, 2008:883). Usually, the responsibilities of other caregivers are limited to social and playful interaction.

In the Hausa culture, which is found in Nigeria, multiple caregiving is practiced, but it is not as strict as in the Gusii culture (Van Ijzendoorn & Sagi-Schwartz, 2008:883). Hausa men (Muslim) are allowed to marry as many as four wives, and thus caregiving is mostly restricted to adult caregiving, as the women do not have to work in the fields (Van Ijzendoorn & Sagi-Schwartz, 2008:883). At any given time, there are about four caregivers per child all contributing to social, verbal and playful interaction with the child, together with the mother (Van Ijzendoorn & Sagi-Schwartz, 2008:883). Each Hausa infant attaches to at least three to four attachment figures including the father, despite having multiple caregivers, however, each infant attaches to one principal caregiver to whom most of the attachment behaviours are directed (Van Ijzendoorn & Sagi-Schwartz, 2008:884). The main attachment figure is the person who holds and interacts the most with the infant, not necessarily the biological mother. The Hausa culture demonstrates how attachment behaviours stem from protecting infants from environmental dangers through the use of multiple caregiving arrangements (Louw et al., 2014:14).

The Dogon people in West Africa, rely on subsistence farming. Infants live in compounds and are raised by multiple caregivers (Berk, 2013:433; Smith et al., 2011:113). Fathers have children with a few wives, and in the first year of life, children are raised by their biological mothers, siblings and other family members who make up the set of caregivers (Smith et al., 2011:113-114). In a study carried out by True (1994), the Dogon dyads were filmed using the Strange Situation Procedure (Van Ijzendoorn & Sagi-Schwartz, 2008:885). The results of this study showed a higher percentage of disorganised attachment in infants in the Dogon dyads (24%) in comparison to Western samples (15-20%). The percentage of securely attached mother-infant dyads was high at 69%. Insecure-avoidant attachment patterns in infants were not observed and there was a low level of infants with resistant attachment patterns. Ultimately, the results showed a score of 88% secure, 12% resistant and 0% avoidant attachment styles (Van Ijzendoorn & Sagi-Schwartz, 2008:885).

Amongst the Efe people of the Democratic Republic of Congo, multiple caregiving exists throughout the first year of life (Robinson, 2007:28; Van Ijzendoorn & Sagi-Schwartz,

2008:886). Infants are allowed to suckle adult females other than biological mothers, and child rearing is the responsibility of a number of adult caregivers (Robinson, 2007:28; Van Ijzendoorn & Sagi-Schwartz, 2008:886). Even basic physical activities such as feeding and bathing are shared, and multiple caregiving does not only occur in the absence of the mother (Keller, 2015:182; Van Ijzendoorn & Sagi-Schwartz, 2008:886). Morelli and Tronick (1991 in Van Ijzendoorn & Sagi-Schwartz, 2008:886) indicate that by 18 weeks of age an infant is cared for by an average of 14 caregivers at a time, which leads to immediate responses to infant cues and/or distress.

In many countries, older siblings are also involved in the care of infants (Arnett, 2016:223). For instance, in African cultures research has found that the needs of the group are considered more important than the individual, children are expected to do errands at young ages, and children are assigned to take care of their younger siblings (Louw et al., 2014:14). These children have been found to display more nurturing behaviour than children who spend more time with their peers, as in Western countries where more attention seeking and competitive behaviours are displayed (Louw et al., 2014:14). Research conducted in South Africa, however, has found that children who take care of their siblings as a result of the loss of one or both parents, have a higher risk for acquiring physical and mental problems (Louw et al., 2014:15). This aspect is however related to social realities that will be discussed in the next section, rather than cultural factors.

In Mary Ainsworth's renowned study of Ugandan babies, she found that single caregivers were not the variable that determined infant security, and that multiple caregiving arrangements did not prevent secure attachment from forming (Jennings, 2011:49; Keller, 2013:176; Van Ijzendoorn & Sagi-Schwartz, 2008:880; Vicedo, 2017:4). Ainsworth's study showed that the continuity and quality of mother-infant interaction was more important than the number of caregivers involved (Van Ijzendoorn & Sagi-Schwartz, 2008:880). Despite the multiple caregiving arrangements in Uganda, infants were found to still attach to their mothers, using them as a secure base from where they can explore the world and their environment (Keller, 2015:176, 183).

When the Strange Situation was replicated in multiple caregiving contexts, similar results were found in Western cultures in terms of secure and insecure infant attachment (Van Ijzendoorn & Sagi-Schwartz, 2008:883). Thus, multiple caregivers can be a positive factor in terms of infant security and development, as long as they are consistent and sensitive in their caregiving (Keller, 2015:182). In considering aspects of multiple caregiving that could enhance secure attachment, it was for example found that older Gusii mothers may have higher levels of sensitivity because Gusii women gain status with age, and thus may be more sensitive to infant cues. Also, in a larger house, mothers can share their duties with the other women, giving them more time and energy to be attuned to their infant's attachment cues (Van Ijzendoorn & Sagi-Schwartz, 2008:883). This is an important arrangement for

mothers in traditional African cultures given that mothers need time for their domestic chores, which as women they are expected to fulfil (Keller, 2015:183).

Culture has been found to have an influence on the **socialisation of children** (Louw et al., 2014:14). German parents, for example, encourage independence and less emotionally expressive behaviour in their children, while in the Japanese culture, mothers remain very close to their infants and dependence is encouraged (Keller, 2015:182). Chinese culture favours interdependence over independence, and emotional interdependence is considered important in Chinese childrearing. In Chinese culture, the focus is more on social harmony and control in social relationships. Western parents focus more on spontaneity and individuality (Van Ijzendoorn & Sagi-Schwartz, 2008:887). It is noted that studies on socio-emotional development and attachment are almost non-existent in the People's Republic of China (Van Ijzendoorn & Sagi-Schwartz, 2008:887). Chinese and Japanese parents tend to be over-protective and indulgent with their children in the beginning, while they are still deemed to be dependent, but they are very strict and expect more responsibility from their children as they become more independent, between two and six years of age (Arnett, 2016:220).

In the Gusii culture in Kenya, infants are greeted by their mothers and caregivers with a handshake, and the level of security is determined by how the infant either reaches out to the mother with one arm or both (Van Ijzendoorn & Sagi-Schwartz, 2008:883). These socialisation practices indicate differences in the interpretation of sensitive and responsive caregiving as proposed in attachment theory (Berk, 2013:434; Mercer, 2015:382).

In some developing countries, the **independence of infants** is often determined by practical considerations related to the lifestyle of the community (Garcia Coll & Magnuson, 2000:99-101). As an example, the Hausa people have a central, common cooking and working area between their huts where there are dangerous tools and utensils and infants are not allowed to fully explore their environments alone due to these dangers (Van Ijzendoorn & Sagi-Schwartz, 2008:884). Hausa caregivers are therefore permissive and sensitive but are rather restricting when it comes to allowing the infant to explore the environment. Consequently, Hausa infants differed from Western infants in their preference for exploration and in their use of attachment or signalling behaviours. Research indicates that Hausa infants still use their caregivers as a secure base from which to explore the environment and are able to distinguish between a caregiver and a stranger (Marvin et al., 1977 in Van Ijzendoorn & Sagi-Schwartz, 2008:884).

Attachment theory proposes that attachment security is determined by child-rearing behaviours such as sensitive and prompt **responses to the infant's signals** by the mother, although other factors may also play a role (Mckenna, 2009:16). The 'sensitivity hypothesis' has therefore been confirmed in a number of Western experimental studies (Mckenna, 2009:16). The majority of infants in Western societies have been found to be securely attached (60%), whereas about 40% have been found to be insecurely attached (Van

Ijzendoorn & Sagi-Schwartz, 2008:882). Caregiving contexts seem to influence the responsiveness to infant cues in non-Western contexts. As a result of a very populated Hausa communal compound, there is usually an immediate response by an older sibling or an adult to an infant's attachment cues, such as crying (Van Ijzendoorn & Sagi-Schwartz, 2008:884). Among the Dogon people in Mali, West Africa, infant mortality is high, with a mortality rate of 25% in the first five years of life (Van Ijzendoorn & Sagi-Schwartz, 2008:885). Consequently, mothers breastfeed their infants on demand frequently, and keep them within very close proximity at all times (Berk, 2013:433; Smith et al., 2011:112-113). There is a preference for physical interaction over verbal interaction with their infants, and an immediate response towards distress signals of the infants (Smith et al., 2011:112-113).

In the !Kung San (Bushman of North-western Botswana) and Efe or pygmies of the Ituri forest in North-eastern Zambia, a hunter-gatherer society is present, characterised by small semi-nomadic groups without strict social roles and flexible strategies to sustain themselves (Berk, 2013:26). !Kung infants in the societies of Botswana are breastfed on demand and whenever they cry. At night, infants are close to their mothers and fed on demand (Konner, 1977 In Van Ijzendoorn & Sagi-Schwartz, 2008:886). Physical contact is extreme in comparison to Western cultures as infants are carried around in a sling, keeping the infant within close proximity to the mother's breast at most times (Miller & Commons, 2010:3). This very intense child rearing environment makes these mothers indulgent and sensitive to their infant's cues. There is a slow transition into the peer group where older peers take care of the younger toddlers (Van Ijzendoorn & Sagi-Schwartz, 2008:886). Despite the multiple caregiving environment in this culture, the infant is still protected, sheltered and stimulated by the mother-infant bond (Miller & Commons, 2010:3). It therefore appears that contextual factors such as the above, support prompt responses to infant cues.

Referring to studies among different cultural groups, Robinson (2007:33) points to **sleeping arrangements** as "one of the most representative of cultural differences" and as "one of the earliest culturally determined parent-child interactions." Berk (2013:134) agrees that infant sleeping arrangements are strongly influenced by culture, with 90% of the world population adopting parent-infant co-sleeping. Co-sleeping arrangements have been found in a variety of cultures, for example the Japanese, Korean, Guatemalan Maya, Inuit in Western Canada, the !Kung of Botswana, and other Asian and African cultures. Whereas infants from Western families tend to sleep in their own room, those from collectivist cultures that value interdependence tend to sleep with their parents up to a certain age (Berk, 2013:134; Martorell et al., 2014:169; Robinson, 2007:33). Other cultures such as in the United Kingdom, emphasise the couple sleeping together in the same room, rather than co-sleeping of the mother-infant dyad (Jennings, 2011:105).

In the Israeli Kibbutzim, collective sleeping arrangements for children were organised away from their parents, a specific characteristic of the Kibbutzim childrearing practices (Keller, 2015:181; Robinson, 2007:27). These collective sleeping arrangements were instituted for

healthy, middle class and functional families. Although many cultures, as has been discussed above, practice multiple caregiving, they do not have sleeping arrangements away from their infants as in the Israeli Kibbutzim. The children were put to bed at night by their parents, and then left with a caregiver (Keller, 2015:181). Children began communal living and sleeping a few months after birth. Sagi-Schwartz and his colleagues (1985) researched the effects of communal sleeping among children in the Israeli Kibbutzim versus children living with their families in other Israeli cities (Van Ijzendoorn & Sagi-Schwartz, 2008:890). It was ultimately concluded by Sagi-Schwartz et al. (1985, 1984, 1987, 2002) that greater insecurity existed amongst the communal sleeping children than the city children. The inconsistent responsiveness as a result of mothers being available during the day but not at night is thought to lead to ambivalent attachment (Robinson, 2007:27). Therefore, it is believed that the sensitivity hypothesis is validated where maternal sensitivity and responsiveness at all times predict security of attachment (Mckenna, 2009:16). The results of these Israeli studies demonstrated a high amount of ambivalent attachment, and an almost absence of avoidant attachment (Van Ijzendoorn & Sagi-Schwartz, 2008:891).

Sagi-Schwartz and his colleagues (1985) also found that a secure attachment to a non-parental caregiver in infancy, in addition to attachment to the primary caregiver, leads to a strong likelihood that the child will be empathic, independent, dominant, achievement-focused and directed in her behaviour in day-care (Van Ijzendoorn & Sagi-Schwartz, 2008:891). Similar characteristics were not found in terms of the quality of the child's attachment to her biological parents. Research ultimately showed that sensitive, consistent multiple caregiving offering an extended network of caregivers is a good predictor of effective functioning later in life, as long as there is a 'good enough' attachment to the main caregiver (Robinson, 2007:27).

7.2.2 Diverse cultural practices with regard to the measurement of attachment

Cultural influences on mother-infant attachment behaviours and on the socialisation of children could have a significant effect on how attachment is measured. A number of aspects to consider in this regard were mentioned in the discussion above and were also highlighted in the discussions on culture in Chapter 3 and on the measurement of attachment in Chapter 4.

In the opinion of Berk (2013:432), cultural differences might result in variation in the interpretation of indicators and types of attachment among different cultural groups. In agreement, Van Ijzendoorn and Sagi-Schwartz (2008:880) state that the three principal attachment patterns formulated by Ainsworth, namely secure, insecure-avoidant and insecure-ambivalent attachment, are not necessarily universally normative in a collective, multiple caregiving society, but are considered to be normative to a particular middle-class, Westernised culture that is socially supportive of the mother-infant dyad as the main caregiving relationship.

In addition, research conducted in Japan and the United States challenges the traditional attachment hypotheses related to the Strange Situation Procedure (Arnett, 2016:175; Mckenna, 2009:82; Tomlinson, 1997:118; Vicedo, 2017:9). As an example, the Strange Situation has been criticised for being an invalid method of assessment of Japanese infants, as these infants have continuous close proximity to their mothers as part of their culture and Japanese mothers consider a strong emotional reaction upon reuniting to be normal as the infants are not used to being separated from their mothers (Berk, 2013:432-433; Van Ijzendoorn & Sagi-Schwartz, 2008:892). On the other hand, the Beng people in West Africa socialise infants from birth into welcoming all strangers; thus, Beng infants rarely show behavioural signs of stranger anxiety. A similar welcoming attitude has been found amongst Brazilian Indians (Keller, 2015:184). Arnett (2016:215) explains that stranger anxiety varies depending on the extent of infants' exposure to diverse caregivers.

If a particular culture positively reinforces the suppression of emotions, it could be argued that an infant will be regarded as developing an avoidant attachment pattern, whereas in the specific society this behaviour is considered normal in that it leads to acceptance, fitting in and adapting to the norms of that society (Van Ijzendoorn & Sagi-Schwartz, 2008:880). Importantly, one of the main critiques of attachment theory is cultural blindness, with a strong Western bias focusing on the mother-infant dyad (Arnett, 2016:219; Keller, 2015:187; Vicedo, 2017:9). Santrock (2009:195) highlights that attachment theory is often criticised in that "it ignores the diversity of socialising agents and contexts that exist in an infant's world." If it is not taken into account that similar mother-infant behaviours might have different meanings in different cultures, cultural characteristics could mistakenly be defined as deficiencies (Garcia Coll & Magnuson, 2000:100-101; Mckenna, 2009:82-83; Robinson, 2007:31). In agreement, Dawson et al. (2017:7) warn that a universal measurement of attachment according to Western measures might lead to misinterpretation and pathologising culture-specific mother-infant behaviours.

The South African population is characterised by its cultural diversity. Although the study focuses on the possible influence of culture on attachment behaviours of the caregiver, the significant influence of adverse socio-economic conditions on attachment should be recognised. The latter is important in light of South Africa being a developing country with many socio-economic challenges. An overview of the South African context will be presented as background to the development of the attachment-based parenting programme.

7.3 THE SOUTH AFRICAN CONTEXT

In this section, the researcher explores the important issues to consider within the socio-cultural and socio-economic context of South Africa.

7.3.1 The South African socio-cultural context

South Africa is comprised of a population from different cultures, languages, backgrounds, and religions with different types of dressing, dancing, eating habits and greeting styles (Atmore, 2013:152; Idang, 2015:99). In the Mid-year population estimates 2018 (Statistics South Africa, 2018), the South African population is estimated at 57,73 million. Historically, the South African population has been divided into four main groups, namely White, Black African, Coloured and Asian, with the Black African population divided into the Zulu, Xhosa, Tswana, North-Sotho, South-Sotho, Swazi, Ndebele, Venda and Shangaan (Christopher, 2002:17,70), with the largest segment (25,4%) living in Gauteng (Statistics South Africa, 2018).

According to demographic statistical research 80.8% of the population in South Africa are Black, 8.8% Coloured, 8% White and 2% Indian (Statistics South Africa, 2017). As Black ethnic groups form the largest section of the collective cultural context, three Black African cultures were included in this study. There is a population of 14,278,700 people in Gauteng making up the largest portion (25.3%) of the South African population, Kwa-Zulu Natal has a population of 11.1 million (19.6%), followed by the Northern Cape with a population of 1.21 million (2.1%) (Statistics South Africa, 2017:1). Due to the number of different cultures in the South African context, the focus on the influence of culture when studying mother-infant attachment behaviours, is necessary.

As the researcher is interested in the potential influence of culture on attachment, participants from different cultural groups have been included in the study. As mentioned in the population that was relevant to this study (Chapter 5), the researcher focused on the main Black ethnic groups residing in Gauteng, namely the Zulu, Xhosa and Sotho, and on the White, Coloured and Asian populations (Countries Quest, 2015).

In South Africa there is a variety of family household structures and practices in different races and cultural groups (Rabe & Naidoo, 2016:2). An absence of biological fathers is particularly common amongst migrant labourers or young men, although mothers are still considered to be the main attachment figures in most families (Parliamentary Liaison Office, 2013:3; Rabe & Naidoo, 2016:2). There are also low nuptiality rates and marriage at a later age, most particularly for Black South Africans (Rabe & Naidoo, 2016:2).

The traditional Black African cultures are characterised by close kinship relations, because in these cultures it is believed that it takes a village to raise a child collectively (Idang, 2015:108). Children are viewed as a form of social security and economic assets, and parents take joy and honour in having them. Women are expected to bear as many children as possible and childlessness is perceived as a curse (Idang, 2015:109). Teenage pregnancy has a cultural meaning of proving fertility (Varga, 2003 in Chetwin, 2010:42). Losing a child is a terrible misfortune in the African culture (Blumberg, 2013:7). An infant's health is considered to be the mother's responsibility from birth until early childhood, and a child's

bad luck is attributed to the mother. These factors may have an effect on the mothers' experience of motherhood and her ability to contain her child, as a consequence of the anxiety and stress of having to be responsible for her child's health (Blumberg, 2013:7-8).

In the past, women in the Sotho culture did not tell anyone of their pregnancy out of fear that they may be bewitched (Minde et al., 2006:550). Bewitchment is an African cultural term which is defined as a physical and mental state that is acquired as a result of displeasing the ancestors, or not following particular cultural customs (Blumberg, 2013:9). When bewitchment occurs, protection from the ancestors is withdrawn, leaving the person and her family vulnerable. Possibly following traditions in order to avoid bewitchment takes away some of the fear and anxiety the mother might have for her child's health (Blumberg, 2013:9-10). Birth complications are believed to occur as a result of a poor relationship with the ancestors, not being faithful during pregnancy or practicing witchcraft, rather than as a result of physical complications. A positive relationship is maintained with the ancestors by observing traditional customs in order to secure the wellbeing, health and happiness of themselves and their children (Chidester, 1992 in Blumberg, 2010:10).

Traditional African cultures display a power imbalance between men and women, as documented in the White Paper on Families in South Africa (Parliamentary Liaison Office, 2013:3). A boy is often considered to be higher in ranking than a girl, and Women are required to be submissive in heterosexual relationships (Aspoas & Amod, 2014:583). Due to this inequality, they are often forced into sexual relationships leading to unwanted pregnancies and sexually transmitted diseases. As a consequence, there is also a higher incidence of teenage pregnancies and more violence against women (Aspoas & Amod, 2014:583; Parliamentary Liaison Office, 2013:3). This cultural factor could be regarded as a risk to caregiver-infant attachment in South Africa.

Universally and in African cultures, grandmothers play a dominant role and may even assume the role of the main attachment figure until the child reaches a certain age (Blumberg, 2013:8). In African cultures, it is often prohibited for the father to be present at birth. In rural areas, the father will leave the village and return once post-partum bleeding has stopped (Chidester, 1992 in Blumberg, 2013:9). In urban areas there is a trend away from excluding the father during the post-partum period, but in rural areas this practice is still more dominant (Blumberg, 2013:9).

Another common cultural practice amongst African cultures is the mobility of children within the extended family (Chetwin, 2010:5). As multiple caregiving arrangements are common, it is considered normal for a child to be raised by and live with numerous caregivers. According to attachment literature, this practice could lead to attachment disruptions (Chetwin, 2010:5). Migration in South Africa has had an impact on the age, structure and distribution of the provincial population, with Gauteng and Western Cape experiencing the largest inflow of migrants from 2016 onwards (Statistics South Africa, 2017:1).

Most White South Africans find their cultural origins in Western countries and follow more individualistic forms of child-raising in a nuclear family (Maluleke, 2012:4). Many Whites in South Africa prescribe to middle class values and standards (Chetwin, 2010:12). The South African socio-cultural context represented in this study is thus a diverse and rich one.

In order to assess maternal behaviours in diverse societies, it is proposed that interactional assessments that assess maternal behaviours in naturalistic home observations, which are less clinical and not in a laboratory setting, are required (Mckenna, 2009:79). Such assessments would provide critical raw data on unique cultural belief systems and practices that enhance attachments between the parent and infant/child in the South African context (Aspoas & Amod, 2014:588; Tomlinson, 2000:1).

7.3.2 The South African socio-economic context

The White Paper on Families in South Africa highlights the socio-economic contextual factors impacting parent-child attachment and refers to the effects of violence and trauma in pre- and post-colonial South Africa (Parliamentary Liaison Office, 2013:3). Apartheid is defined as a political system of racial separation that was enforced in South Africa for over one hundred years (Atmore, 2013:152). Trauma in South Africa caused by factors such as colonialism, political violence and racism as a consequence of Apartheid, has been compared either directly or indirectly to the holocaust (Adonis, 2016:1; Murray, 2009:2). Trans-generational transmission of trauma is defined as the memories of oppression being passed on from generation to generation (Adonis, 2016:1; Kynoch, 2016:65). Secondary traumatisation shows how children and grandchildren who were not victims of human rights abuse during Apartheid have been and still are affected by trauma (Adonis, 2016:6). These children have seen the trauma of their parents or grandparents who have been victims of violence. They have experienced the absence of a parent or grandparent leading to obstructions in their attachments that affect their secure base (Adonis, 2016:6).

As discussed in the White Paper on Families in South Africa (2013) severe poverty in South Africa is a contextual and social problem that can obstruct attachment (Aspoas & Amod, 2014:583; Parliamentary Liaison Office, 2013:4). Research has found that approximately 200 million children in Africa are failing to reach their developmental potential due to poverty (Cooper et al., 2014:143). Many children live in dwellings or informal shacks that are over-crowded with a poor water supply and sanitation; factors that are all affecting the ability of caregivers to effectively look after their children and provide sensitive care (Aspoas & Amod, 2014:583). Unemployment leading to poverty is considered to also be a severe social and economic problem in the South African context and often used as an indication of socio-economic well-being (Weir-Smith, 2016:1). Indirectly, poverty has the effect of leading to illness and emotional exhaustion in the caregiver. Depression may result from trying to raise children under such adverse conditions (Aspoas & Amod, 2014:583). There are multiple direct adverse effects of poverty, such as poor growth and physical health, poor socio-emotional well-being and a negative impact on the cognitive skills and development of

infants and their mothers (Cooper et al., 2014:144). As a consequence of poverty, there is a vicious cycle of deprivation leading to unwanted pregnancies, child abuse and unemployment, which are rife in South Africa (Cooper et al., 2014:144).

In South Africa, hunger and malnutrition due to poverty are serious problems that affect the healthy development of infants and children (Arnett, 2016:139; Aspoas & Amod, 2014:583; Atmore, 2013:156). Since 1994, there have been changes in early childhood development policies and programmes, some of them being positive, namely free medical and health care services for all pregnant women and for their children from birth to six years of age (Atmore, 2013:153). Alleviating these social problems would support mothers, allowing them to focus more on their infant's emotional needs and bonding. It should be considered that poverty has a permeating impact on parents being present in the lives of their children, with practical needs overriding the emotional needs of the child concerned, which affects the quality of attachments between the parent and child.

Research has found that working mothers are less available for their infants due to work stress and constraints, with the result that they often have less energy for their infants (Tomlinson et al., 2005:1044-1045). Mothers living in informal settlements in South Africa are not always able to provide consistent care to their children due to work constraints, and children are often left with various members of the community in rural areas, while parents attend work (Tomlinson et al., 2005:1044-1045).

HIV/AIDS in Sub-Saharan Africa is a social problem that has introduced challenges threatening the survival and healthy development of orphaned and vulnerable children in the area (Mkwanazi, Rochat & Bland, 2015:65; Schenk, 2009:918). Globally, South Africa has the highest number of pregnant women with HIV/AIDS, which affects their attachment to their infant babies (Fatti et al., 2016:114).

The White Paper on Families in South Africa (2013) focuses on the high numbers of sexual violence against women and children (Parliamentary Liaison Office, 2013:3). Currently, South Africa is documented to have the highest rape figures for any country that is not at war (Du Toit, 2014:101). Annually 65 000 rape cases are filed by the South African police service and these numbers have been found to be growing steadily since the 1990's (Du Toit, 2014:101). Escalating figures of rape after the political transition from Apartheid to Democracy are evident. Overall, 40% of these reported incidences of rape are documented to affect victims under 18 years of age, and 15% victims under 12 years, with most perpetrators being known to the victims (Du Toit, 2014:101). Rape is a cause of unwanted pregnancies, and a trauma that complicates attachment between mother and infant.

High levels of unwanted pregnancies have been confirmed by research as a serious medical, social and public health problem in South Africa (Naidoo, Zungu & Hoque, 2013:341). Studies have demonstrated that approximately 80 million unplanned pregnancies occur worldwide every year (Naidoo et al., 2013:341). One third of unwanted pregnancies lead to

unsafe abortions, of which 53 million occur each year in developing, resource-poor countries (Muruya & Sebitloane, 2013:172). Unwanted pregnancies however continue to be a problem in South Africa, having substantial effects on attachments between mother and child.

Antenatal and postnatal depression are more prevalent in South African society; factors that are obstructing caregivers' ability to take care of infants effectively (Aspoas & Amod, 2014:583; Cooper et al., 2009:1045). Post-partum depression is, for example, three times higher in peri-urban South African settlements than in the United Kingdom, putting infants at risk of developing an insecure base and insecure attachments (Aspoas & Amod, 2014:583).

The understanding of attachment theory in a South African context is important as there is insufficient focus on infant and child development in the developing world (Cooper et al., 2009:1044). Further research needs to be conducted on the socio-economic issues of sexual violence, poverty, HIV/AIDS, power imbalances between men and women, unwanted pregnancies, antenatal and postnatal depression, hunger, malnutrition, work constraints, high infant mortality rates, homelessness and violence, and their effects on attachment behaviours (Aspoas & Amod, 2014:588; Tomlinson, 1997:42). Parental pressures affecting cultural values, goals and practices with regards to child-rearing in African communities differ markedly from the main focus of research on child development in the Western context. Attachment theory in this context becomes important when considering the nature of parenting under conditions of severe adversity in the informal settlements of South Africa (Bain, 2014:601).

Further research collecting broad socio-demographic data taking into account poverty and other socio-economic factors in a developing world context such as South Africa is needed, when developing an early intervention programme for mothers and their infants (Bain, 2014:601). The above-mentioned information on the South African social context was considered and applied in the development of the attachment-based programme discussed in the following section.

7.4 THE DEVELOPMENT OF THE ATTACHMENT-BASED PARENTING PROGRAMME

Based on an overview of the literature on attachment (Chapter 3), existing attachment programmes and measuring instruments (Chapter 4), data collected from participants from various South African cultural groups on their perceptions of the influence of culture on attachment (Chapter 6), and literature on the South African context (Chapter 7), the focus of this section will be on a proposed attachment-based programme for the South African context. Against this background, consideration is given to the theoretical framework of the study, namely attachment theory and ecological systems theory, as discussed in Chapter 2.

7.4.1 The focus of the attachment-based programme

The first two years of life are seen as a window of opportunity for the development of attachment (Levy & Orlans, 2014:59). During these years, the development of secure mother-infant attachment depends on sensitive caregiving (Levy & Orlans, 2014:59). It is, however, recognised in the literature that culture might influence parenting practices, and could therefore influence caregiver behaviours related to the development of secure attachment in infants (Arnett, 2016:142; Keller, 2015:175). The programme developed as part of this study focuses specifically on attachment in the diverse socio-cultural South African context. Based on information on other parenting programmes in South Africa that the researcher could access (as described in chapter 4), this specific focus on culture appears to be different to that of other parenting programmes.

Other examples of parenting programmes in South Africa that could be accessed were described in Chapter 4. The *Baby Mat project* focuses on psychotherapeutic services, including aspects related to attachment, for mothers/caregivers and their infants while they wait for immunisations and consultations at healthcare clinics (Aspoas & Amod, 2014:582). The programme was developed with consideration of the socio-economic circumstances of these mothers and infants. The *New Beginnings programme,* which was piloted in shelters for homeless women and children, focused on enhancing mothers' attunement to the cues of their infants by raising awareness of how their past childhood experience could influence current practices (Bain, 2014:591; Harduth-Dass, 2011:3). The *Thula Sana project*, an early intervention programme with mothers and infants from before birth to post-partum six months, implemented and trained by lay community workers, was intended to promote sensitive parenting in communities where adverse socio-economic factors could affect attachment behaviours (Cooper et al., 2009:1). The *Mama Zamma programme* (Van Niekerk & Nell, 2012:8) is more generalist, not focusing on attachment particularly, but also on the physical and intellectual well-being of the infant as well as emotional, social and attachment issues.

The focus of the attachment-based intervention programme will be on the importance of the quality of maternal attachment behaviours for attachment between mother and infant. To heighten maternal sensitivity, infant attachment signals will be a focus in the intervention programme developed in this study. The programme will focus on the importance of cultural factors in South Africa that appear to affect mother-infant attachment behaviours that might have an impact on the quality of the mother-infant relationship. Factors which will be considered are cultural norms and values affecting attachment behaviours, secondary attachment figures, a consistent, structured environment and routine, and the effects of the parents' social setting.

This programme is intended for mothers or caregivers of infants between six to eighteen months old, but could be presented to mothers before and directly after the birth of the

baby. The programme will also focus specifically on attachment in the diverse socio-cultural South African context.

Intervention activities will be applied in order to lead to greater reflection and self-awareness of the mother as an attachment figure, guiding the exchange between mother and infant.

7.4.2 Content of the attachment-based programme

The intention with the attachment-based parenting programme was to enhance caregiver behaviours that could support caregiver-infant attachment; being sensitive to cultural factors in South Africa that could affect mother-infant attachment behaviours and their impact on the quality of the mother-infant relationship. Based on the literature on attachment and the research findings in the first part of this study, key themes were identified for inclusion in the programme. These themes will be discussed in this section.

7.4.2.1 Attachment is an innate biological process

As indicated in Theme 1 in the empirical findings in Chapter 6, participants from the three study samples from all the represented cultures in the study considered that attachment is an internal, instinct-driven process between the main caregiver and the infant, despite cultural origin. However, participants from the sample of experts and professionals indicated that they experienced that mothers and caregivers generally had a lack of knowledge about the concept of attachment and the importance of attachment in the optimal development of the child. The programme therefore has a focus on the importance of attachment and universal concepts of attachment, however, with sensitivity to cultural practices that influence maternal attachment behaviours. Bonding and the intrinsic need to attach and promote survival is introduced in the programme as it is a universal need across all cultures.

Attachment has a significant impact on the neurobiological and socio-emotional development of children, lasting into adulthood (Booth & Lindaman, 2010:65). Early attachment experiences strengthen the neurological networks of the social brain and assist in building the brain by stimulating metabolic arousal (Booth & Lindaman, 2010:65; Cozolino, 2010:180). Caring connections and secure attachments build strong and resilient brains, while neglectful and insecure attachments build brains more susceptible to stress, dysregulation, and mental illness (Arnett, 2016:216; Bowlby, 2007:310; Cozolino, 2010:180). The long-term impact of attachment is strongly related to the internal working model that a child develops based on the internalisation of the mother-infant relationship (Berk, 2013:430; Stern, 2002:119; Sherman et al., 2015:110).

Attachment theory was initially put forward by John Bowlby as a universal theory of human development applied to all humans in all socio-cultural contexts and times (Robinson, 2007:24). Inclusion of a foundational knowledge on attachment was recommended by

professionals and experts in the study sample as an important component in the development of an attachment-based parenting programme within a multi-cultural South African context.

7.4.2.2 The influence of culture and acculturation

Although, at times, the distinction between culture and social norms in determining caregiver behaviours is not always clear. Theme 2 in the empirical findings, which focused on the influence of culture on attachment, indicated that cultural norms and practices could have an influence on attachment. Participants mentioned how culture would determine how mothers raise their children. It appears that different cultures might adopt different parenting practices as indicated by the mother and professional participants (sub-theme 2.1), which are often carried over to the next generation through historical attachments, as voiced by participants from all the cultures represented in the study (sub-theme 2.2). However, some participants pointed out that factors such as urbanisation, pre-natal classes and exposure to the media resulted in them not following the parenting practices that would be more relevant to their parents' generation or to children raised in rural areas (sub-theme 2.3). In the multi-cultural South African context, it was therefore deemed relevant to include a discussion on the influence of culture in parenting practices and attachment behaviours (sub-themes 2.1 and 2.2), and the possible questioning of cultural practices due to acculturation (sub-theme 2.3), in the programme.

The programme will be structured so as to discuss and compare the influence of different cultures on attachment, as well as the role of historical attachments and acculturation on the mother's attachment behaviours.

7.4.2.3 The concepts of attunement, responsiveness and maternal/caregiver sensitivity

In the participants' recommendations for the content of an attachment-based parenting programme, experts and professionals recommended inclusion of the concepts of attunement, responsiveness and maternal/caregiver sensitivity as in their experience, mothers/caregivers were often not aware of the importance of sensitive and responsive care in practice (refer sub-theme 7.2). Attending to the infant's physical and emotional needs, and responding to infant cues (sub-themes 4.1, 4.2 and 4.3) under the theme of sensitive care, confirmed the views of the experts and professionals. In terms of responding to infant cues, many participants voiced the belief in letting a baby cry so that the baby will learn not to expect immediate attention to her needs from her mother (sub-theme 4.3). Indian participants tended to regard good parenting as a high level of responsiveness to the infant. Some participants held the view that attending to a crying infant is regarded as spoiling the baby; a view which seemed more prominent among the Zulu participants (sub-theme 5.4). In their views on discipline (sub-theme 5.7), participants mentioned that good parenting is associated with firmness and with physical punishment. As the research findings indicated that the participants' conceptualisation of "good" caregiving did not always relate

to the concept of sensitive care as described in attachment theory, a discussion on responsive and sensitive care will be included in the programme.

Literature on attachment indicates that sensitive parenting is a core element underlying the development of secure mother-infant attachment (Hall et al., 2015:321; Mingo & Easterbrooks, 2015:471). A caregiver's attunement to the infant's needs facilitates sensitive caregiving (Holmes & Slade, 2018:25). Attunement is one of the important caregiver behaviours for the development of sensitive caregiving, as indicated in Chapter 3. A discussion of the concepts of responsive and sensitive care was thus included in the programme. Cultural sensitivity is required when working with these concepts and with participants from various different cultural perspectives. When presenting an attachment-based programme it is essential to achieve a balance between understanding different views towards bonding, and teaching participants about brain development of the infant being dependent on sensitive and attuned care for functional and healthy development and growth (Levy & Orlans, 2018:23).

7.4.2.4 Caregiver behaviours that could enhance secure attachment

In the literature on attachment, certain caregiver behaviours are indicated as enhancing mother-infant attachment, including touch; eye contact and gazing; smiling, positive affect and playful engagement; prompt response to crying; feeding and breastfeeding; holding and rocking; and face-to-face interaction (Booth & Jernberg, 2010:22; Holmes & Slade, 2018:46; Jennings, 2011:36, 49, 112; Levy & Orlans, 2014:16, 62, 68; Nelson, 2005:54; Robinson, 2007:26; Stern, 2002:91). The stages of the development of attachment in the first two years of life will be discussed, as initially described by John Bowlby (Berk, 2013:429; Keller, 2015:179; Delius et al., 2008:396), to accentuate the importance of caregiver behaviours over this period. These stages will be explained according to sensitive and critical periods for the development of attachment for the infant, and in relation to the current developmental stages of the infants that are relevant to the focus of the programme.

In the empirical findings presented in Chapter 6, it appears that certain caregiving behaviours mentioned by the participants are in support of the above-mentioned behaviours. These include breastfeeding as a bonding practice (sub-theme 5.1), co-sleeping (sub-theme 5.2), and carrying the baby on the mother's back (sub-theme 5.3).

Other caregiving practices, however, seemed to be less aligned with caregiver behaviours that could enhance secure attachment. One of these practices relates to perceptions that sensitive care is related to attending to the infant's physical needs, whereas the infant's emotional needs seem often to be overlooked (sub-themes 4.1 and 4.2). Furthermore, some participants did not regard face-to-face interactions and quality time spent with infants as important aspects of care (sub-theme 5.5) or placed a priority on caregiver-infant play (sub-theme 5.6).

Recommendations for the development of the programme by expert and professional participants link with the less optimal attachment behaviours indicated in the empirical findings above. These participants indicated that aspects such as the importance of mother-infant interaction (sub-theme 7.5) and setting of boundaries and limits to enhance healthy discipline (sub-theme 7.6) must be included in the programme. They also advised that knowledge on parenting styles (sub-theme 7.3) and the effect of historical attachments (sub-theme 7.7) should be included in the programme as foundational knowledge for mothers/caregivers to understand their own parenting practices.

It is thus concluded that specific behaviours that support the development of secure attachment (Holmes & Slade, 2018:46; Levy & Orlans, 2014:16, 62, 68), should be included in the programme. Behaviours such as touch, eye contact, smiling, feeding, holding, face-to-face interaction and play relate to neurobiological development as a consequence of sensitive, responsive and reliable care (Bowlby, 2007:310). Research on caregiver behaviours to enhance secure attachment as indicated in Chapter 3, is therefore included in the programme, however, with sensitivity to knowledge and practices that might be relevant to different cultures as well as based on historical attachments.

Eye contact between mother and infant has been found to enhance secure attachment. As Stern (2003:33) mentions, cultural norms to do with eye contact fall away when one considers how mothers gaze at their infants. Stern highlights certain Western cultural rules around eye contact, such as staring for long periods not practiced amongst adults without speech due to its' intense potency, however, this not being an issue with regards to infants (Stern, 2002:34). Eye contact has proven to be important in early human relations in studies in the West, where three-month-old infants showed more interest and smiled more at faces they could fully see, compared to those of which they only saw a profile (Stern, 2002:53). Findings have suggested that infants have an innate preference for the human face (Stern, 2002:34). Western research has confirmed that the quality and sensitivity of face-to-face interaction between the main caregiver and child from a few months into the first year of life predicts secure attachment and the development of the social brain in which neurons in the amygdala are activated by familiar faces (Cozolino, 2010:186; Smith et al., 2011:17). Other findings, however, show that direct eye contact is viewed as inappropriate in various African and Asian cultures (Mckenna, 2009:18-19; Robinson, 2007:32-33). In this study, eye contact between mother and infant was mentioned as important and necessary by Indian professionals and some of the African professionals (sub-theme 8.4). Eye contact between children and adults is not a norm in certain cultures. However, mother-infant eye contact plays a significant role in attachment and neurobiological development (Cozolino, 2010:185-186).

Participants in the study samples in the first phase of data collection (Chapter 6) discussed the importance of eye contact in the different African cultures represented, as direct eye contact from a child to an adult can be viewed as disrespectful. However, that this is only

the case with older children, not infants. Eye contact was mentioned by African mother participants as disrespectful between parents and older children (sub-theme 8.4). As mentioned by Zulu and Xhosa professional participants, eye contact by an older child to a parent is viewed as arrogant and rebellious. However, modern African mothers living in urban areas spoke of this view no longer being the practice, and most particularly not the case with infants (sub-theme 8.4). Therefore, as indicated in the literature and by the participants in Chapter 3 and Chapter 6 respectively, eye contact should be observed with sensitivity and with consideration of variance based on age and race, but is an important indicator of maternal behaviour that enhances attachment.

As indicated in the literature review in Chapters 3 and 6, the quality of *touch* has been found to be associated with maternal sensitivity and promotes secure attachment and brain development (Jennings, 2011:36; Levy & Orlans, 2014:16). A gentle, warm motherly embrace enhances attunement, brain stimulation and a sense of security in the infant (Bick & Dozier, 2013:97; Jennings, 2011:36; Levy & Orlans, 2014:16). Participants who were experts on mother-infant attachment mentioned that maternal sensitivity through the quality of appropriate touch and holding is an important behaviour serving as a precursor to attachment security (sub-theme 8.2, 8.5). The programme will therefore include the quality of touch as an important behaviour that enhances secure attachment. The importance of a warm, safe and nurturing response to the needs of a child will be elaborated on in the programme.

Quality of *interaction and engagement* is considered important in terms of tracking behaviour by the mother and infant, as it leads to responsiveness and the baby feeling that she is valued enough to be engaged with and watched over (Karasik et al., 2014:388; Siegel & Hatzell, 2003:81). Quality of interaction and engagement can also be observed through the art of play. Play is expressed differently in different cultures, however, the degree of creative, patient interaction and play between caregiver and infant are important as play encourages learning, emotional regulation, bonding and self-esteem development, as well as facilitates a secure attachment (Booth & Jernberg, 2010:5). It is, however, important to keep in mind that culture determines the expression of playful activities such as dance, drama, art, theatre, rites, rituals and storytelling (Jennings, 2011:26). As mentioned by participants in traditional Sotho, Zulu or Xhosa African cultures, mother-infant play is less important than fulfilling the physical needs of the infant (sub-theme 5.6). The participant mothers in the White and Indian cultures spoke of the importance of play and stimulation, valuing it more highly. In the attachment-based parenting programme, practical strategies will be discussed where mothers are facilitated to work with their infants in a more sensitive, sensory and playful manner; an aspect that will help mothers with creating a more enhanced structured, facilitative environment for their infants. The intention is to apply some aspects of neuro-dramatic play in the attachment programme, thus enhancing the neural and social development of the infants by discussing the art of play and neuro-sensory stimulation leading to a circle of care, attachment and containment between the mother

and infant (Booth & Lindaman, 2010:39; Jennings, 2011:14). Such an approach will make the programme unique as it appears that South African interventions for enhancing maternal attachment behaviours have not focused on the art of play with a cultural focus.

Expert and professional participants indicated that the quality of *communication* is an important behaviour to consider in the development of an attachment-based parenting programme (sub-theme 8.2). The quality of listening and tone of voice was mentioned by a number of professional participants across the Xhosa, White and Coloured cultures (sub-theme 7.5), where it was said that Black Africans speak with a higher pitch than most other cultures, and sometimes express themselves more loudly when communicating with their children. The importance of communication by means of listening and talking is not always valued, as mentioned by participants (sub-theme 7.5). As an expert participant mentioned (sub-theme 7.5), technology is another intrusive factor obstructing effective communication. Studies reported in the literature have confirmed the importance of warm and sensitive collaborative communication in the reciprocal exchange between the mother and infant (Booth & Jernberg, 2010:4; Siegel & Hatzell, 2003:80). Positive exchanges facilitate the formation of a positive internal working model in the infant and are thus integral across cultures (Siegel & Hatzell, 2003:81). The practice of warm and sensitive communication is thus an important behaviour that enhances secure attachment and will be discussed with sensitivity to culture in the programme.

Literature has found the difference between many cultures of the world with regards to valuing *independent versus dependent behaviours* (Keller, 2015:180). It has been found that an ambivalent attachment style could possibly form as a result of a greater push towards children's independence too early in their development (Keller, 2015:180). White and Indian mothers and professionals spoke of promoting dependence in the attachment behaviours of the infant (sub-theme 4.3). As indicated by Sotho, Zulu and Xhosa mothers, as well as Sotho and Coloured professionals (sub-theme 4.3), the push amongst African cultures appeared to be towards independent behaviours in infants from early in their development. Research has found that mothers have a variety of goals depending on their socio-economic conditions, cultural traditions and social class, and have different expectations regarding independent and dependent behaviours based on such social and cultural differences (Vicedo, 2017:10). A participant who was an expert on mother-infant attachment spoke of observing a developmentally inappropriate expectation of independence in African cultures, which should be noted. Furthermore, research has found that neglecting an infant, due to a fear of spoiling, could impair brain development (Miller & Commons, 2010:1). Literature studies have confirmed that in African cultures, young children are more involved in assisting with household duties than young children in developed countries (Louw et al., 2014:14). In African cultures, children are socialised to participate in activities as part of the shared community responsibility. As indicated in Chapter 3, the Temiar people of Malaysia foster greater independence in their infants (Jennings, 2011:49). Thus, this aspect is

included in the attachment-based parenting programme and will be discussed with consideration of a variance to culture in the South African context.

When developing the programme, *parenting practices* and the related norms and values centred on culture and attachment will be included as group discussions during the programme from a multi-cultural perspective. Such discussions would require the facilitator to continually assess the fit of the materials used with the different cultures in the South African context.

In the implementation of the programme, the researcher will consider methods of presentation that could enhance the transmission of information to the participants in the programme.

The programme will include a manual for each session, which each participant will receive at the start of the session. Video demonstrations and discussions alongside group activities to facilitate the integration of information related to attachment concepts and maternal attachment behaviours will be applied throughout the programme. The programme will be structured by first presenting and discussing universal attachment concepts. In the third and fourth sessions, the programme then will focus more on discussing attachment and cultural practices and different cultural attachment experiences within the represented South African cultures. The focus then will turn to socio-economic adversities in South Africa affecting attachment and bonding. In all the sessions, the discussions will provide opportunities for reflection on the personal and multi-cultural perspectives of the participants, as will be highlighted in the next section.

7.4.3. Factors that affect the development of attachment

The effects of contextual factors on mother-infant attachment were highlighted in different themes and sub-themes in the research findings presented in Chapter 6. These effects relate to parental roles and multiple caregiving contexts (Theme 3) as well as to socio-economic factors (Theme 6). The programme in this study thus strives to find a '*goodness of fit*' between the infant and mother (Martorell et al., 2014:226). A goodness of fit refers to a child's unique temperament with regards to activity level, adaptability to the environment, intensity of reactions and mood (Arnett, 2016:168). Infant temperament has been studied and classified with the use of parents' reports of their infants. Such reports are not always accurate as depressed mothers rate their infants' temperament more negatively, and there is often a difference between mothers' and fathers' ratings of their infants' temperament (Arnett, 2016:168). A goodness of fit refers to a child developing best when there is a good fit between the child and the parent's temperament in the environment.

- **Multiple caregiving**

Although the mother was identified as the main person responsible for infant care, it was found that infants were often cared for by multiple caregivers such as grandmothers and, at

times, older siblings. It became clear that in South African cultures, more particularly the Xhosa, Sotho, Zulu, Coloured and Indian cultures, the extended family play a large role in the care of infants. Attachment to a main attachment figure might thus be influenced by multiple caregivers. Literature indicates that multiple caregiving is highly prevalent in developing countries (Keller, 2015:182) and research studies show that if caregiving is still consistent and sensitive in such settings, multiple caregiving does not seem to negatively affect secure infant attachment (Garcia Coll & Magnuson, 2000:98-99; Louw et al., 2014:14; Polek, 2007:14). Studies have found the main attachment styles observed in the Strange Situation to occur across eight different cultures in the West (Robinson, 2007:25). However, other studies of the Strange Situation attachment styles in the South African context have been conducted by Tomlinson (1997:107), and found that multiple caregiving, common in South Africa, has an impact on the infant's exploratory behaviour system.

Studies have confirmed that the quality and consistency of nurturing care the infant receives is more important than care by the mother figure only (Robinson, 2007:32). This is apparent in the Hausa culture where children are raised by numerous caregivers but also still attached to the mother in a warm, supportive environment (Van Ijzendoorn & Sagi-Schwartz, 2008:884). It is therefore important not to devalue cultural and ethnic diversity in family structures, as the nuclear family is not the experience of many children in South Africa and other non-Western countries (Arnett, 2016:219; Tomlinson, 1997:118). The strength and nature of attachment can be understood by focusing more on culturally specific behaviours such as eye contact and sleeping arrangements (Robinson, 2007:32-33).

- **Adverse socio-economic conditions**

As indicated in the research findings in Chapter 6, mother and professional participants also highlighted the effects of contextual factors such as poverty and adverse conditions, a hurried modern lifestyle, and single parenthood and teenage pregnancy on the mother's ability to provide sensitive care (sub-themes 6.1, 6.2, 6.3). Socio-economic conditions such as poverty, unemployment and crime are examples of conditions that can negatively affect the development of mother-infant attachment (Bain, 2014:593; Cooper et al., 2009:1045).

Ecological systems theory indicates that children develop in multiple contextual layers, including the home, wider community, and society (Berk, 2013:28). Given the socio-economic reality in South Africa, the attachment programme will include information on socio-economic aspects that might influence mother-infant attachment. A discussion on socio-economic aspects are deemed as important, as adverse conditions have proven to affect the ability of mothers or caregivers for self-regulation, which is regarded as a significant aspect of sensitive care and maternal attachment behaviours. Some of the professional and expert participants suggested that mothers should develop knowledge and skills of maternal/caregiver self-regulation due to the important role of the mother in teaching her infant how to regulate her emotions (sub-theme 7.4). Maternal/caregiver self-regulation is the capacity to regulate the emotions of the infant by means of her own

emotional self-regulation (Horenczyk et al., 2015:339; Leerkes et al., 2015:94). Maternal/caregiver self-regulation, mentioned as cross-culturally important, was included in the programme.

The effects of work and stress to sustain their families arose as an important theme by the mothers, experts and professionals across all represented cultures (Sub-theme 6.2). The research findings indicated that working mothers often have to leave their children with grandmothers, other caregivers or in day-care. This situation impacts attachment as many children enter day-care at early ages (Arnett, 2016:218). Studies show children to be affected by the quality of day-care rather than the age at which they enter day-care (Berk, 2013:441). Therefore, the importance of selecting a consistent, sensitive, nurturing caregiver/day-care facility was included in the programme. Good quality day-care could prevent young children being exposed to adverse social conditions.

- **Parenting styles**

Professional and expert participants spoke of a need for more knowledge on various parenting styles, and how to set boundaries and limits in a sensitive but clear manner. These participants stressed the importance of psycho-education on parenting styles (sub-theme 7.3). Studies has revealed that the quality and type of attachment is affected by parenting practices that dominate in a particular culture (Flanagan, 2002:92; Jones & Cassidy, 2014:438; Mingo & Easterbrooks, 2015:471; Robinson, 2007:25). Parenting styles are also carried over from one into the next generation, and therefore are an important consideration in terms of mother-infant attachment (Wessels, 2012:8). The programme therefore included work on parenting styles, and how to communicate and listen effectively in order to set limits, providing the infant with a sense of security (Jones & Cassidy, 2014:438).

The above themes were considered in the development of the attachment-based parenting programme. The programme is outlined in Table 7.1

7.4.4 Implementation of the attachment-based programme

The attachment-based parenting programme is comprised of four sessions, each session being 2 to 3 hours long. The focus on information about attachment will be presented by means of a participant manual and verbal instruction. Hand-outs to assist mothers to better understand their past and current attachments will be supplied to illustrate the programme content more effectively. Videos will also be used in the implementation to provide concrete examples of some of the concepts discussed. Throughout the programme, opportunities for questions and comments will be provided to ensure that all the participants fully understand the programme content. Reflective discussions to accommodate perceptions and experiences of participants from different cultures will be encouraged to provide deeper insight into the topic. Tea/coffee breaks will be allowed to

‘refresh’ and prevent exhaustion. The sessions will be kept short to keep participants actively engaged and provide information in manageable units.

The purpose, learning outcomes, content, materials and activities applied in the programme are described in the following outline.

Table 7.1 Outline of attachment-based parenting programme

SESSION 1			
Purpose	**Learning outcomes**	**Content**	**Materials and activities**
To be introduced to and understand the basic terms and concepts related to mother-infant attachment	• To understand the concept of mother-infant attachment • To understand secure and insecure attachment • To understand the concept of sensitive care • To gain knowledge on the long-term effects of attachment • To become aware of the possible influence of differences in cultural norms and practices on caregiving	• The concept of attachment; stages in the development of attachment during infancy • The difference between secure and insecure attachment styles; the long-term effects of secure and insecure attachment; the role of mental representations of attachment • Sensitive care and mother-infant attunement in the development of secure and insecure attachment styles • The role of socio-cultural factors on caregiving practices	Programme manual Hand-out: 'What you wish for your child?' Video clips: • Demonstration of different attachment styles; • Experiments on attachment: Harry Harlow's experiments with rhesus monkeys; Conrad Lorenz's experiments with goslings. Activity: Mother looks at a picture of her baby while listening to a song to reflect on how she is the centre of her baby's world. Reflective discussion: participants' experiences and perceptions related to the topics discussed in the session.

SESSION 2			
Purpose	**Learning outcomes**	**Content**	**Materials and activities**
To understand the importance of sensitive care To become aware of the role of mother-infant attunement and emotional regulation in the formation of attachment	• To understand caregiver roles in terms of sensitive care • To identify behaviours related to maternal sensitivity and responsiveness • To understand the role of fathers in the formation of attachment during infancy • To become aware of the possible influence of differences in cultural norms and practices on caregiving	• The concept of sensitive care • Maternal sensitivity, attunement and emotional regulation; paternal involvement in the care of the infant • Maternal responsiveness • The importance of consistency, routine and structure in bathing, feeding and sleeping routines and practices • The role of socio-cultural factors on caregiving practices related to maternal sensitivity	Programme manual Hand-outs /Activities on self-regulation. Video clips demonstrating the “still-face procedure”, the effects of emotional deprivation on infants, mother-infant attunement, maternal and infant self-regulation Reflective discussion: participants’ experiences and perceptions related to the topics discussed in the session

SESSION 3			
Purpose	**Learning outcomes**	**Content**	**Materials and activities**
To understand the concept of the secure base and related mother-infant behaviours To understand certain mother-infant behaviours that support secure attachment in infants	• To know the function of the secure base • To recognise mother and infant behaviours related to the secure base • To appreciate and understand maternal behaviours that affect maternal sensitivity, maternal responsiveness and maternal feedback	• Discussion of the secure base concept; exploration and proximity • Maternal responses that affect secure base formation • Positive mother-infant interaction, engagement and maternal feedback. Including play, eye contact, face-to-face interactions, gentle and sensitive holding of the infant, mother-infant quality time • The possible influence of socio-cultural factors on caregiving practices related to secure base behaviours, maternal interactive style and maternal feedback	Programme manual Hand-outs on the Circle of Security loop (Marvin et al., 2002:110). Video clips: • Secure-base behaviours • Maternal responsiveness Reflective discussion: participants' experiences and perceptions related to the topics discussed in the session

SESSION 4			
Purpose	**Learning outcomes**	**Content**	**Materials and activities**
To understand factors that can affect mother-infant attachment. To gain insight into own parenting practices. To appreciate the value of positive self-care for mothers.	• To gain knowledge of socio-cultural and adverse socio-economic factors that can affect maternal attachment behaviours • To become aware of the role of historical attachment in maternal attachment behaviours • To obtain knowledge on positive self-care strategies	▪ Historical attachments/learned parenting practices ▪ Parenting styles ▪ Attachment practices and culture: feeding, sleeping, playing, eye contact, infant stimulation, carrying practices ▪ Adverse socio-economic conditions that lead to family and maternal stress ▪ Secondary caregivers, e.g. extended family or siblings; day-care ▪ Positive self-care to support secure mother-infant attachment	Programme manual Handouts on historical attachments and their effects. Video clips: • parenting styles • cultural influences in children's play • day-care Reflective discussion: participants' experiences and perceptions related to the topics discussed in the session

The content of the attachment-based parenting programme as well as the literature on the measurement of attachment, as discussed in Chapter 4 and Chapter 6, was considered in the development of the measuring instrument that was used for the observation of maternal attachment behaviours in this study. A discussion on the development and content of the measuring instrument follows.

7.5 THE DEVELOPMENT OF THE MEASURING INSTRUMENT

The measuring instrument developed for this study followed the outline as presented by Hirshmann et al. (2011:296), in which indicators related to caregiver behaviours were organised into three categories, namely *Maternal sensitivity*, *Maternal interactive style* and *Maternal feedback*. As mentioned by Hirshmann et al. (2011:308) "… observation of maternal sensitivity, maternal feedback, and maternal behaviour in joint attention episodes provides a solid basis for the assessment of the quality of mother-child interactions." The indicators were selected based on findings from Chapter 6, as well as universal attachment theory concepts and concepts specific to the South African context, which arose from the literature review in Chapters 3 and 4.

In order to carefully select specific categories and indicators, the researcher first reviewed literature on measurements of attachment that have been internationally standardised, and considered a gold standard for the assessment of infant attachment security in present day, namely the Strange Situation Procedure (SSP) and the Attachment Q-Set (AQS) (Arnett, 2016:175,214-215; Keller, 2015:177; Smeekens et al., 2009:368) that were available on public platforms. Meta-analyses of studies in the Western and non-Western contexts have proven that the AQS can be considered an adequate measure of mother-infant attachment across cultures (Dawson et al., 2018:1; Smeekens et al., 2009:368). Considering that studies have demonstrated that similar behaviours in the Strange Situation may have different meanings in different cultures, the cross-cultural validity of the Strange Situation has been questioned (Robinson, 2007:30).

The **SSP** assesses whether the infant uses the caregiver as a secure base particularly under increased levels of stress (Arnett, 2016:214; Pallini & Laghi, 2012:159; Smeekens et al., 2009:368). As the programme that was developed for this study focused on maternal behaviours that support secure attachment, the measuring instrument in this study does not observe the infant's reaction to stranger anxiety, as there is no third person (stranger) brought into the analysis. Scholarly debates mentioned in Chapter 4 and point 7.2.2 in this chapter question the applicability of the SSP to a South African context, since multiple caregiving arrangements are common in South Africa, possibly reducing the effect of stranger anxiety (Keller, 2015:184; Robinson, 2007:30; Tomlinson, 1997:1).

Separation and reunion are indicators applied to the measuring instrument. The mother will be asked by the researcher to separate by walking away and then return to her infant during

the play session. However, the mother will not be requested to leave the room, as in the SSP.

The **AQS** scores the infant's exploration of the environment whilst also seeking proximity to the mother and the mother's behaviour in response to this exploration (Pallini & Laghi, 2012:158; Smeekens et al., 2009:369). The AQS focuses on specific attachment-related behaviours of the mother and infant when mediating between the attachment and exploratory systems, and addresses the infant's expectations of parental guidance and support under general everyday low stressful conditions (Cadman et al., 2018:2; Dawson et al., 2018:1; Smeekens et al., 2009:369). The measuring instrument in this study focuses mainly on attachment behaviours of the mother under low stress conditions, however, is not home-based but conducted in a clinic environment in order to measure against a constant environment for all participants in the study.

The following section contains a discussion of how the research findings (Chapter 6) informed the development of the measuring instrument. The focus and process of the development of the measuring instrument will first be reflected on, then an explanation of the categories and indicators applied, and finally an outline of the measuring instrument will be provided.

7.5.1 The focus of the measuring instrument

In order to accurately measure maternal attachment behaviours, a measuring instrument to collect data and to determine the effect of the programme was developed. The measuring instrument is consistent with the content of the attachment-based parenting programme that was developed for the study, as reflected in the themes and sub-themes derived from the semi-structured interviews in Chapter 6. More recent cross-cultural research has consistently confirmed a universal set of attachment behaviours existing (Bain, 2014:593). The choice, expression and interpretation of these behaviours are, however, culturally patterned over time (Arnett, 2016; 219; Robinson, 2007:25). The process of the development of the measuring instrument is described below.

7.5.2 Process of the development of the measuring instrument

The techniques that were involved in the development of the measuring instrument were concept development, specification of concept dimensions, selecting the correct indicators, describing the indicators and forming an index (Hirschmann et al., 2011:299; Kothari, 2004:75). The concepts were underpinned by attachment theory and selected based on theory and research on maternal attachment behaviours. The dimensions indicated the range in which each indicator was scored. The indicators were the predefined measures used to observe the quality of maternal behaviours. The descriptors described each indicator for the observer's understanding and clarity. All indicators were then grouped under one of the three main categories applied to the measuring instrument in this study.

- While developing the concepts for the measuring instrument, the researcher familiarised herself with the main attachment theory concepts as discussed in Chapters 3 and 4, and analysed these with consideration of the data collected in phase 1 of the study from a multi-cultural sample (Chapter 6). Specific concepts that pertained to maternal attachment behaviours were then carefully selected.

- In the next step, indicators were selected for scoring each concept element. Indicators are defined as specific questions by which participants' behaviours, opinions, expectations are measured (Kothari, 2004:75). Numerous indicators were selected in order to give stability to the measurement and improve its validity. Each indicator will be measured by means of scoring a specific maternal behaviour as either very high or very low for each indicator.

- In the following step, the various indicators were combined to form three categories. Therefore, a number of different indicators of a concept were combined to form categories or constructs in an index. An overall index for the various concepts in the research study was drawn up (Kothari, 2004:75). The indicators were carefully arranged under each construct.

- Each indicator was then defined clearly by means of a descriptor in order to prevent confusion and ensure clarity and accurate scoring by the researcher.

- In the final step, a pilot test of the instrument was conducted in the same setting where the videos for the pre- and post-test were recorded at the clinic. The pilot test ascertained the appropriateness of the scale and setting and assessed changes which needed to be made for future accurate scoring (De Vos & Strydom, 2011:484). As a result, the positioning of the camera for the recordings was changed in order to ensure the recording of a better image of the mother and infant to better observe the indicators. Some indicators that focused more on infant behaviours were eliminated and some added to specifically focus on maternal behaviours.

7.5.3 The content of the measuring instrument

The development of a child centres largely on mother-child interactions (Hirschmann et al., 2011:296). In the development of the measuring instrument, the researcher considered the mother-child interactions, namely maternal sensitivity, maternal interactive style and maternal feedback as described by Hirshmann et al. (2011:296) as central to optimal child development, as important maternal behaviours fostering secure attachment.

Maternal sensitivity, defined as a prompt, accurate and consistent response by the caregiver to the infant, has been found to be a precursor of attachment security (Ainsworth et al., 1974 in Hirshmann et al., 2011:296; Funamoto & Rinaldi, 2014:4). Research has demonstrated that quality maternal sensitivity minimises stress in infants, leading to psychological health, resilience and stability, whilst promoting more secure attachments to

parents and peers (Miller & Commons, 2010:2). Maternal sensitivity can be reflected in maternal behaviours such as feeding on demand and a quick response to crying (Miller & Commons, 2010:2). Maternal sensitivity, although considered the most important precursor to attachment security, is not the only factor that has an impact on the quality of mother-infant interaction.

Maternal interactive style is also an important maternal behaviour affecting the quality of mother-infant interaction (Hirschmann et al., 2011:296). Maternal interactive style, which focuses on the reciprocal exchanges and relationship between the mother and infant from birth to two years, involves separations and reunions of the mother and infant and how the mother copes with her infant using signals and cues to negotiate and change goals (Berk, 2013:429; Delius et al., 2008:396; Keller, 2015:179). Maternal interactive style facilitates the formation of a secure base within the infant if the mother consistently welcomes her infant with warmth as she explores the environment and returns to her (Smith et al., 2011:110).

Maternal feedback, another important maternal behaviour affecting the quality of mother-infant interaction, assists an infant to learn whether her behaviour is appropriate and fulfils parental expectations (Hirschmann et al., 2011:297). Positive, corrective maternal feedback has been found to lead to greater resilience and self-esteem, whereas negative feedback leads to greater shame as a result of failure and lower levels of self-esteem, therefore having an impact on the internal working model of the infant (Hirschmann et al., 2011:297).

Due to the focus on maternal behaviours in the work of Hirshmann et al. (2011), the three constructs described above were used as a guideline in the development of the measuring instrument in this study. These three constructs were used to focus on measuring maternal behaviours that support secure mother-infant attachment. These constructs serve as the three main categories in the measuring instrument.

7.5.4 Categories applied to the measuring instrument

When developing the measuring instrument, three main categories or constructs were applied in order to observe maternal attachment behaviours. Indicators that fell under each category were carefully selected to reach a total of 27 indicators.

7.5.4.1 Maternal sensitivity

In the measuring instrument, the mother's sensitivity will be scored in terms of the mother promptly responding to infant signals in the following manner:

- The mother is able to attend to a common object with the infant with sensitivity and careful responsiveness.
- The mother cares physically for her infant, as observed through an infant that is clean, tidy, well dressed and fed.

- The mother notices the infant's signals and reacts promptly and appropriately to the infant. The mother is accurate in picking up the cues the infant is giving her.
- The mother can adopt the infant's viewpoint with ease and gentleness, without being overpowering or intrusive.
- The mother handles the infant with gentleness displaying patience with her infant throughout the session (Hirshmann et al., 2011:300).

Indicators describing maternal sensitivity relate to attachment theory. Attachment theory emphasises the importance of accurate, gentle and careful responsiveness to a child leading to the formation of a secure attachment (Mckenna, 2009:16). In order for a mother to be sensitive infant signals need to be perceived and interpreted accurately. The development of empathy in the mother and infant develops by means of their shared experiences that lead to their bodily and emotional interconnectedness (Jennings, 2011:171). A lack of maternal sensitivity is associated with insecure attachment and poor developmental outcomes (Axe 2007 in Mckenna, 2009:16). Indicators 1 to 6 under this category are selected according to the mother creating a sense of comfort and trust, the quality of physical touch, the fit between the mother and child, the physical appearance of the child, as well as the mother's reaction to any signs of distress in the child.

7.5.4.2 Maternal interactive style

The researcher considered positive and negative indicators of maternal interactive style when scoring in this category. The positive indicators of maternal interactive style focussed on the following:

- The mother follows the lead of the infant's attentional focus by tracking the infant carefully and assuming an active role in common play.
- The mother follows, rather than directs the infant's play interest and allows the infant to lead the interaction.
- The mother scaffolds the infant's play interest by breaking activities down into simple steps.
- Episodes of joint attention (engagement) between mother and infant are observed where the mother engages in play activities which involve interaction between mother and infant (Hirshmann et al., 2011:300).

In the observation of negative indicators of maternal interactive style, the following maternal behaviours were considered:

- Attention switching: The mother directly attempts to switch her infant's attention away from the on-going activity towards a new one.

- Attention manipulation: The mother manipulates the infant's attention during an on-going activity by directing the child's attention to certain aspects or away from other aspects of a game or activity.
- No joint attention: The mother spends no time in joint-attention episodes engaging in no play activities, turn taking and interaction with her infant (Hirshmann et al., 2011:300)

Under this category, the quality of attention given to the infant by the mother is observed. Joint attention refers to the ability of the infant to coordinate her attention with a social partner with respect to an object or event. There are several ways in which dyadic joint attention can be attained (Hirshmann et al., 2011:298). Research has found a close association between attachment and social attention co-ordination in mother-child interactions when co-ordinating face-to-face attention and joint attention to objects (Pallini & Laghi, 2012:159). Flexibility of attention is seen in a securely attached child who is able to focus attention on the main caregiver when in need, and explore the environment placing attention on other objects when her main needs are fulfilled (Pallini & Laghi, 2012:159). A securely attached child is able to show the caregiver the results of her exploration.

Importantly, attention is influenced by the ability of the caregiver to regulate her own and her infant's emotions (Pallini & Laghi, 2012:160). Emotional self and co-regulation of the mother and the infant is thus closely tied in with maternal interactive style. Maternal interactive style eventually leads to a child forming an internalised affect regulatory process (Holmes & Slade, 2018:26). This occurs by means of the child mirroring the mother and moving from co-regulation to self-regulation of her emotional state, developing the skills to accurately read her own emotions and to be congruent with them (Holmes & Slade, 2018:26).

A broad distinction can be made between the categories of "attention switching" versus "attention following" (Hirshmann et al., 2011:298). The former, characterised by caregivers who actively seek to switch the infant's attentional focus during interaction, is believed to be more beneficial for infants six months and younger, because they are generally more passive and less likely to initiate or lead interactions with their caregivers. The latter, a style in which the caregiver follows the lead of the infant's attentional focus, proves to be more conducive to older infants (Hirshmann et al., 2011:298), as in this study.

Indicators 7 to 22 under this category in the measuring instrument focus on the attention that the mother gives her infant, as well as on the quality of the mother's responsiveness. The mother will be observed carefully for tracking behaviours in terms of 'attention switching' versus 'attention following'. The quality of face-to-face interaction and general engagement of the mother with her infant are observed when including eye contact and separation behaviours as indicators. The degree of exploration, listening and sharing (toys and objects) and emotional regulation are therefore also observed under this category. In this section, indicators 10, 11 and 19 focus on infant behaviours in order to observe the

quality of maternal behaviours from the infant's reactions, i.e. whether the mother makes the infant feel safe enough to explore the environment and manages to adequately form a secure base for the infant. According to attachment theory, maternal interaction involves the mother engaging in sensory experiences, rhythmic movements, songs and games and in dramatised interactions with her baby (Jennings, 2011:14). Such interactions lead to children feeling secure within themselves and enable them to interact with other people.

7.5.4.3 Maternal feedback

Parental evaluative feedback can take several forms, including positive evaluative responses, negative evaluative responses, and corrective responses (Hirshmann et al., 2011:297). Maternal feedback involves verbal maintenance where the mother verbally comments on the child's actions and/or outcomes (Hirshmann et al., 2011:297).

The variety of feedback patterns are:

- Positive feedback from the mother is positive in content and tone.
- Negative feedback from the mother is negative in content and tone.
- Corrective feedback is to be understood as an attempt to correct children's actions with feedback that is negative or critical in content, but neutral or positive in tone.
- No verbal feedback from the mother (Hirshmann et al., 2011:300).

The indicators under this category are selected to observe the quality of responses by the mother, and the mother's responses to the child's needs. Therefore, the quality of communication and synchrony between mother and child are scored as indicators under this category. Attachment theory research has found that the mother's communication with her infant with different voice tones and reactions, lead to the infant learning to understand human communication and how to express emotions (Stern, 2002:48). According to attachment theory, communication is reciprocal which implies that a mother will communicate and a child will react to what is said and how the mother responds (Jennings, 2011:193). Indicator 24 is specifically used to score the quality of the mother's communication with her infant. The degree to which the mother promotes age-appropriate independent behaviours (indicator 27) as well as the child using the mother as a resource (Indicator 23) when exploring the environment, are included in order to score the quality of the mother's responses to the infant.

7.5.5 The implementation of the measuring instrument

The measuring instrument will be implemented by observing mother-infant play sessions in which maternal behaviours will be observed and scored.

- To provide consistency, the mother-infant play sessions for the pre- and post-test videos will be conducted in the same environment.

- The same toys will be used for each play session.
- The duration of the play sessions and videos recordings will be eight minutes, providing the researcher with time to accurately assess and score maternal behaviours.
- All mother participants will be informed that they can be mobile during the play session, and move around in the room during the play session.
- The observer and independent observer will score maternal behaviours in two-minute intervals, where the videos will be carefully watched and paused every two minutes. Each category or construct will be scored separately.
- The pre- and post-test videos will be conducted 6 weeks apart.

7.5.6 Outline of the measuring instrument

The measuring instrument is structured and scored on a five-point Likert type scale (Delport & Roestenburg, 2011:211-212) which will be applied to collect first-hand information on observable maternal behaviours. The observers will directly observe and score maternal behaviours as follows: 1 as very low, 2 low, 3 average, 4 above average or high and 5 as very high. The scale will be applied to compare pre- and post-test scores for each individual case.

Table 7.2 Outline of measuring instrument

MATERNAL SENSITIVITY

Indicator	Descriptor
1. Comfortability/Fit. Mother is able to comfort baby with gentleness. Baby remains relaxed and content with mother for periods of time.	Very high - Mother and baby fit together physically with ease. Mother comforts baby with sensitivity; baby seems content in mother's lap. Very low - Mother cannot comfort baby with sensitivity. Baby remains distressed. Mother easily breaks contact with the baby.
2. Maternal comforting behaviour. Mother appears to be sensitive to infant's cues. Mother responds promptly to distress signals.	Very high - Mother offers comfort as soon as distress signals are expressed by baby. Very low - Mother offers no comfort to baby when distress signals are expressed.

3. Holding. Quality of the holding practices by mother of baby. Mother holds baby with gentleness and ease.	Very high - Mother gently holds baby sensitively at times of the play session. Very low - Very little gentle holding of the baby by the mother.
4. Physical appearance. Baby looks clean, well dressed and well fed; the general physical appearance of baby is that of being well groomed. Mother takes care of baby's physical needs by keeping baby clean throughout the session.	Very high - Mother takes care of physical needs of the baby by keeping baby clean and tidy throughout the session. Baby looks clean and tidy. Very Low - Mother does not take care of physical needs of the baby by keeping baby clean and tidy throughout the session. The baby is inappropriately dressed for the situation, e.g. warm or cold clothes.
5. Physical contact/quality of touch. There is appropriate physical contact during play session between mother and baby. Mother enjoys close physical contact with baby.	Very high - There is much personal touch throughout the play session, and mother regularly seeks physical contact with her baby. Mother allows baby to climb all over her. Very low - Mother does not seem to encourage and enjoy physical contact with baby throughout the play session**.**
6. Level of trust of mother by baby. Mother shows trust towards baby by enjoying a variety of play activities and allowing some new play activities and exploration.	Very high - Mother allows different and new forms of play during the interaction. The mother allows and trusts the baby to explore the environment. Very low - Mother does not enjoy being adaptable and flexible when engaging in play activities with her baby. The mother does not allow baby to try new activities with her mother. Mother is hesitant to allow the baby to explore the environment.

MATERNAL INTERACTIVE STYLE

Indicator	Descriptor
7. Tracking behaviour by the mother. Mother looks for baby if baby is out of sight, and follows baby during the play session. The mother keeps track of baby's location and keeps baby in sight.	Very high - Mother follows baby carefully around room, and tracks baby by watching her all the time. Very low - Little tracking behaviour by mother of baby is observed throughout the session.
8. Tracking behaviour by the infant (in order to indicate mother's normal levels of responsiveness). Baby looks for mother if mother is out of sight and follows her as she explores the environment.	Very high - Baby is observed tracking mother moving around the room, and while exploring toys in the environment. Very low - There is little tracking behaviour by the baby of the mother while playing. The infant plays alone without noticing the whereabouts of the mother.
9. Eye contact (from mother to baby). Mother engages in regular eye contact with baby while engaging during play.	Very high - Mother looks baby in the eyes while interacting, i.e. communicating and playing. There is good, direct eye contact throughout the session. Very low - Mother does not look baby in the eyes at any time during play session, or there is very little direct eye contact.
10. Eye contact (from baby to mother). Baby gives mother regular direct eye contact throughout play session as indication that baby is used to mother's regular eye contact and returns it.	High - Baby makes eye contact with mother on a regular basis while playing and interacting with mother. Low - Baby makes little or no eye contact with mother.

11. Separation behaviour (baby reaction to mother separating). Baby's behaviour towards mother when separating when mother walks away and returns. Baby seems to show confidence in mother's availability and responsiveness even when mother separates. Baby appears to believe mother will return with warmth and sensitivity.	Very high - Baby notices when mom separates but is happy to see mom return to her. Baby is confident in mom's availability and responsiveness (shows expectation of responsive maternal behaviour). Very low - Baby shows little or no reaction to mom separating and returning during play session. Baby does not seem to react to mother returning with no gestures and no positive response behaviours (shows expectation of unresponsive maternal behaviour).
12. Separation behaviour (mother reaction to baby separating). Mother's behaviour towards baby when baby separates and explores the environment, and then returns.	Very high - Mother happy to see baby return and welcomes baby with warmth and love. Mother supports exploration of the environment. Very low - Mother barely reacts or notices her baby when her baby separates or returns. Mother shows no positive hand and body gestures in response to her baby returning to her after exploring the environment.
13. Maternal voice tone. The quality of mother's voice tone. Speech is divided into what is said and the way in which it is said, the latter being the focus of this indicator.	Very high - Mother's tone of voice is gentle, a soft spoken, calm tone and does not seem to frighten or startle the baby. Very low - The mother's tone is a loud, harsh or intrusive tone of voice which seems to frighten and/or startle the baby.

14. Engagement and interaction. Level of engagement and interaction by mother with baby during play session by means of listening and responsiveness.	Very high - Mother engages with baby by means of listening and responding to baby's signals at all times. Mother actively plays with baby as opposed to focusing only on baby's physical and practical needs. Very low - Mother spends little time and energy dedicated to playing with baby, and low responsiveness to baby's signals. Mother stands or sits away from baby without much interaction, and allows baby to play alone.
15. Attention. Mother is focused on baby and not easily distractible; her attention is on the baby.	Very high - Mother is not distracted by other people or objects, but focuses her attention directly on her baby throughout the session. Very low - Mother is highly distractible and focused on cell phone, laptop, tablet or any other object/person in the environment rather than her baby.
16. Proximity seeking. The mother encourages proximity seeking. The baby seeks closeness to the mother when she moves away, and crawls/walks to mother to be close to her while exploring the environment.	Very high - Mother seeks to keep baby within a comfortable/safe proximity when the baby attempts to crawl, walk or gesture while exploring the environment. Very low - Mother does not seek to keep baby within comfortable/safe proximity when the baby attempts to crawl, walk or gesture while exploring the environment.
17. Level of exploration. The mother allows her baby to confidently and happily explore the environment and supports or guides her baby when needed.	Very high - Mother allows baby to feel safe and confident to explore the environment and supports baby in exploring. Very low - Mother allows very low level of exploration of the environment, which withholds baby from exploring without the mother.
18. Listening. The mother listens to her baby when baby attempts to communicate. Mother allows baby to	Very high - Mother listens carefully to baby and responds with ease and warmth. Mother looks baby in the face

express herself.	to try understand the baby and follow the baby's verbal and physical cues to listen. Very low - Limited listening to the baby. Mother tries to 'talk over' baby and control what baby wants to say rather than listen and respond accurately.
19. **Sharing**. The mother and baby shares toys and objects during the play activity.	Very high - Mother and baby share toys with each other while playing and engaging. There is a high incidence of turn taking between mother and baby. Low - Mother and baby do not share toys or objects with each other during play session. There is no turn taking between mother and baby.
20. **Patience/Rigidity**. Mother exhibits patience while playing and interacting with baby. Mother is not rigid but flexible in her play activities with baby.	Very high - Mother shows baby how to play, talks to baby and is relaxed following baby's cues patiently and carefully. Very low - Mother consistently exhibits very little patience with her baby. Mother tries to dominate baby with her own play activities without following baby's cues patiently.
21. **Co-regulation of mother and baby's emotions.** Mother controls her own emotions and helps soothe the baby when anxious. Mother stays calm and shows baby how to stay calm while engaging in activities.	Very high - Mother is able to co-regulate by containing any feelings of the baby being overwhelmed and over-stimulated by excessive stimuli, while still ensuring the baby's exposure to a sufficient amount of stimulation. Mother is able to contain her own feelings of anxiety and stress, while keeping the baby soothed and calm. Very low - Mother appears overly stressed, anxious and uncontained with her baby. Mother is unable to contain baby's distressed, anxious emotions by staying calm and responsive.

22. Level of availability and responsiveness of mother. Mother makes herself available to baby and fulfils the baby's physical and emotional needs by following the baby's signals.	Very high - Mother is highly responsive and sensitive to baby's signals and cues throughout the play session. Very low - Mother is withdrawn and not readily available or responsive to her baby's signals for attention.

MATERNAL FEEDBACK

Indicator	Descriptor
23. Using mother as a resource. Baby returns to mom throughout the play session asking and showing her things while exploring the environment, indicating the use of mother as a resource. Mother responds to baby in a warm and positive manner when baby returns to her.	Very high - Mother serves as a positive resource for the baby while exploring the environment. Baby returns to mother for a sense of security and continues to explore the environment with confidence. Very low - Baby does not return to the mother at all for any assistance or security while exploring the environment.
24. Communication. Mother and baby babbles or use specific language and communication with each other during the play session. Mother uses "baby talk" to positively communicate with baby.	High - High level of positive verbal communication between mother and baby. Mother often uses baby talk. Very low - No communication and no baby talk between mother and baby. Communication is harsh or punitive. Mother's speech is negative.
25. Congruency. There is a congruency between what the mother is saying and what she is non-verbally reflecting to the baby. The mother and baby seem to understand each other's intentions accurately.	Very high - There is a congruency between verbal and non-verbal signals of the mother to the baby. Facial expressions and tone of voice of the mother are synchronised and matched, so as to prevent confusion in the baby. Very low - What the mother is saying and what she outwardly and non-

	verbally expresses to the baby do not correspond. The baby appears confused and frustrated due to a lack of understanding mother's inconsistent facial expressions.
26. Interactional synchrony. The mother is able to read and understand infant cues and signals accurately. This is observable in the appropriateness of the mother's feedback.	Very high - Mother responds to most of the infant signals and cues accurately and appropriately throughout the session. The baby appears content with mother's reactions to her signals. Very low - Mother does not seem to be following infant cues accurately and appears to misread the infant's cues.
27. Independent/dependent behaviours Mother allows baby to try play with objects alone and master activities while still gently guiding baby. Mother allows independent/dependent behaviours which are age-appropriate.	Very high - Mother allows baby to try play with toys and explore the environment by creating an age-appropriate balance of guiding the baby but allowing her to master skills alone. The mother provides a balance between dependent and independent behaviours. Very low - Too much independence or dependence is allowed by mother according to the baby's developmental stage, e.g. • Inappropriate expectation of independent behaviours such as expecting baby to feed herself, soothe herself when distressed, manage own play routine completely alone. • Inappropriate expectation of dependent behaviours such as not giving the baby much space to explore, doing most of the playing for the baby, not allowing the baby to explore the environment much throughout the play session.

7.5.7 Considerations in implementation of the measurement instrument

A number of considerations for the implementation of the measuring instrument are suggested in this section. All efforts must be put in place to conduct the play sessions in a manner that will prevent any harm to the infants, as a vulnerable population (Bless et al., 2013:33-34; Strydom, 2011b:115). Practitioners and researchers conducting sessions involving mothers and their infants must ensure a quiet and peaceful environment for the mother-infant play sessions and the recording of the mother-infant videos. The developmental stage of the infants in the study (between 6 to 18 months of age) make infants easily distractible and require a quiet environment with their mothers for the video recording.

Planning and organising time carefully when working with mothers and their infants is recommended. A schedule should be set out for the mother-infant play sessions and video recordings, and the timing thereof carefully arranged based on the convenience and suitability for the mother and infant participants. Clear, regular reminders and follow-up by telephone, or the use of social networks, should be made. A clear schedule should be presented on the day of the programme for further clarity. Although interventions in clinics are suitable and appropriate for some participants, other participants might struggle to organise transportation to the clinic on time for the sessions.

7.6 SUMMARY

The content of this chapter focused on the development of an attachment-based parenting programme intended to enhance maternal attachment behaviours and thus mother-infant attachment within the South-African socio-cultural context, as well as the development of a measuring instrument for these behaviours. Aspects of the development and implementation of the programme and measuring instrument were discussed with reference to the literature on attachment and possible cultural influences on attachment behaviours. The development of the programme entails the intervention that forms part of the process of intervention research. The intervention then needs to be pilot-tested.

In Chapter 8, the research findings based on the pilot testing of the developed programme will be presented. Quantitative results will be based on the pre- and post-test measures obtained through a self-developed observation schedule to determine the effect of the developed parenting programme. Qualitative findings will be provided on the participants' feedback on the parenting programme.

CHAPTER 8

RESEARCH FINDINGS: THE INFLUENCE OF THE ATTACHMENT-BASED PARENTING PROGRAMME

8.1 INTRODUCTION

The empirical findings of the second phase of data collection in the research are presented in this chapter. The quantitative findings based on the pre-test and post-test data obtained from the observation of maternal attachment behaviour are presented in this chapter. The quantitative data are supplemented with information obtained from semi-structured interviews with participant mothers on their experiences regarding the attachment programme. Collecting both quantitative and qualitative data was intended to in order to provide a comprehensive description on the effectiveness of the programme and add credibility to the study. These findings can be utilised for the refinement of the attachment-based programme. As indicated in the description of the process of intervention research followed in this study, the refinement and evaluation of the programme will not form part of this study.

A total of 18 mother participants attended the attachment-based parenting programme that was developed in this study. The participants in the experimental group attended the programme after the pre-test and before post-test data collection. The participants in the comparison group attended the programme after pre and post-test data collection. The biographical profile of the participants will be presented next.

8.2 BIOGRAPHICAL PROFILE OF THE PARTICIPANTS

A total of 18 mother-infant dyads were involved in the quantitative data collection; ten (10) in the experimental group and eight (8) in the comparison group. The biographical profiles of participants in the experimental and the comparison groups are presented in the tables below.

Table 8.1: Biographical profile of research participants (experimental group)

PARTICIPANT	AGE	OCCUPATION	AGE AND GENDER OF INFANT	CULTURE	PLACE OF RESIDENCE
1	28 years	Quality consultant	12 months/Girl	Indian-Hindu/Muslim	Urban
2	34 years	Service delivery manager	11 months/Boy	Indian-Hindu	Urban
3	29 years	Business owner	11 months/Girl	White (English)	Urban
4	33 years	Chartered accountant	6 months/Girl	White (English)	Urban

5	30 years	Attorney	12 months/Boy	White (Afrikaans)	Urban
6	29 years	Nursery school owner/principal	15 months/Girl	White (Afrikaans)	Urban
7	31 years	Student	14 months /Boy	Swazi	Urban
8	34 years	Domestic worker	9 months/Girl	Ndebele/Zulu	Urban
9	37 years	Stay at home mother	13 months/Girl	Xhosa	Urban
10	27 years	Domestic worker	17 months/Girl	Zulu	Urban

Table 8.2: Biographical profile of research participants (comparison group)

PARTICIPANT	AGE	OCCUPATION	AGE AND GENDER OF INFANT	CULTURE	PLACE OF RESIDENCE
11	35 years	Attorney	15 months/Girl	Indian	Urban
12	25 years	Teacher	12 months/Boy	White (Afrikaans)	Urban
13	31 years	HR + Payroll	13 months/Girl	White (Afrikaans)	Urban
14	37 years	Manager	12 months/Girl	White (English)	Urban
15	30 years	Hospitality Supervisor	11 months/Boy	Zulu	Urban
16	29 years	Accountant	12 months/Girl	Sotho	Urban
17	28 years	Self-employed	18 months/Girl	White (English)	Urban
18	28 years	Educator	14 months/Boy	Luba culture (DRC) /French	Urban

The demographic variables relevant to this study were age, gender, race, culture, home language, highest level of education, and place of current and childhood residence.

Although initially the sample criteria stated the age of the mother participants for the attachment-based programme to be between 20 and 30 years, the recruitment of mothers in this age category proved to be difficult. Ethical permission from the Research Ethics Committee of the Faculty of Humanities at the University of Pretoria was requested and granted to change the sample criteria for the mother's ages to be between 20 and 37 years in both the experimental and comparison groups. In the experimental group, five participants were aged between 27 and 30 with five participants between 31 and 37, whereas in the comparison five participants were aged between 25 and 30 years, and three participants between 31 and 37 years.

As this study analyses the phenomenon of mother-infant attachment, all participants in the study were female.

An equal distribution of race was important in this study as the focus of the study was the impact of South African cultures on maternal attachment behaviours. The researcher attempted as far as possible to recruit participants who were representative of South African cultures. Thus, in the experimental group 40% were White, 40% Black African, and 20% Indian. In the comparison group 40% were White, 30% Black African, and 10% Indian. The participants were recruited with the assistance of the postnatal clinic they attended. No Coloured participants were recruited at the time of the study.

In the experimental group, two White participants spoke English and two Afrikaans. The rest of the experimental group was comprised of two Zulu, one Xhosa, one Swazi and two Hindu speaking participants. In the comparison group, there were two English and two Afrikaans participants, one Sotho, one Zulu, one Hindu and one French speaking participant from the Democratic Republic of Congo (DRC). All the participants could converse in English, which is the language in which the parenting programme was presented.

In both experimental and comparison groups, an equal distribution of the represented cultures was achieved, except for the Coloured population. Due to practical considerations in recruiting participants from particular ethnic populations in the specific time frame in which the parenting programme were presented and the pre and post-tests conducted, it was agreed by the researcher and her supervisors to expand the sample characteristics to include a greater variety of South African cultures. The experimental group was comprised of two English and two Afrikaans South African mothers, one Xhosa, one Swazi, two Zulu, and two Indian mothers. In the comparison group, there were two Afrikaans, two English South African mothers, one Indian, one Zulu, and one Sotho mother in the sample. However, a mother from the Luba culture (Democratic Republic of Congo) who was also a patient of the paediatrician at the clinic, expressed a strong desire to participate in the programme, thus the researcher and supervisors agreed to include her in the comparison group.

The highest level of education of the participants in both experimental and comparison groups was a post-graduate Honours degree, and the lowest level a Matric qualification. Most (8) of the participants in the experimental group and all (8) of the mothers in the comparison group were employed. One mother in the experimental group was a student and another a stay at home mother.

All participants resided in urban areas. All participants lived with the biological fathers of their babies, although not all were married.

8.3 QUANTITATIVE RESEARCH RESULTS

The quantitative research results are based on the pre and post-test scores obtained through the observation schedule that was developed for this purpose. In total, 27 indicators were scored, with six (6) indicators for maternal sensitivity, 16 indicators for maternal interactive style and five (5) indicators for maternal feedback. Precise descriptions of maternal behaviours were drawn up for each indicator. In addition, certain infant behaviours were included to provide a more comprehensive understanding of the mother participant's response to her child. The infant behaviours which were included, were: seeking comfort and tracking, separation behaviour, eye contact and proximity seeking, to observe whether the mother has become a secure base for her child by means of her maternal behaviours. Maternal behaviours included as indicators provided information on whether the mother can place attention on a common object with her child, whether she tracks, notices and follows the child's cues and reacts appropriately and quickly to her without becoming overbearing; how the mother reacts to the child's actions and accomplishments in terms of feedback and response quality; and whether her listening, communication, language and voice tone are interactive and appropriate for the child's developmental stage (Hirschmann et al., 2011:300). Each indicator was rated on an ordinal scale ranging from very low sensitivity (1) to very high sensitivity (5) (Kothari 2004:71).

After developing the measuring instrument, the researcher collaborated with the independent observer in a consensus discussion. Each category was assessed using a time sampling procedure with a 2 to 3 minute interval. This was operationalised by watching the video for 2 to 3 minutes and then making a judgement about the interactional quality during the interval. Four videos out of the pre- and post-test measures from both the experimental and comparison groups were rated by the independent observer to assess inter-rater reliability (Hirschmann et al., 2011:301). A scoring sheet was then used to record the scores for each individual indicator and category in the measuring instrument.

The quantitative data will be presented by firstly providing a descriptive summary of the pre- and post-test results for the experimental and comparison groups for the three main constructs identified for the study. Afterwards the pre- and post-test differences within the experimental group and the pre- and post-test differences between the experimental and comparison groups will be presented. A discussion of all the data sets will be presented at the end of this section.

8.3.1 Pre- and post-test results for constructs

A descriptive summary of the pre- and post-test results for the experimental and comparison groups in the study in terms of the three main constructs that were measured, namely maternal sensitivity, maternal interactive style, and maternal feedback, will be presented in Table 8.3 below.

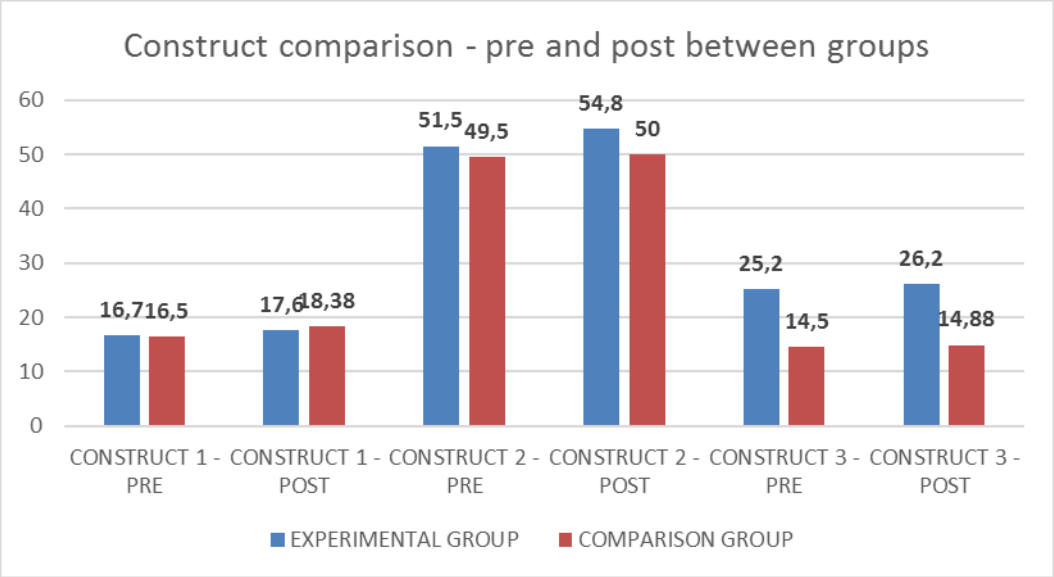

Table 8.3: Construct comparison between groups (pre- and post-test)

The mean score for construct 1 for the experimental group shows a slight increase in behaviours related to maternal sensitivity from the pre-test ($\bar{x}$ =16.7; SD=1.42) to the post-test ($\bar{x}$=17.6; SD=2.07). For the comparison group, the increase in construct 1 was slightly higher than that of the experimental group from the pre-test ($\bar{x}$=16.5; SD=2.07) to the post-test ($\bar{x}$=18.38; SD=2.77). The mean score for construct 2 for the experimental group shows an increase in behaviours related to maternal interactive style from the pre-test ($\bar{x}$=51.5; SD=6.24) to the post-test ($\bar{x}$=54.8; SD=7.41). For the comparison group, the increase in construct 2 was very slight from the pre-test ($\bar{x}$=49.5; SD=5.76) to the post-test ($\bar{x}$=50.0; SD=9.74). The mean score for construct 3 for the experimental group shows a slight increase in behaviours related to maternal feedback from the pre-test ($\bar{x}$=25.2; SD=31.99) to the post-test ($\bar{x}$=26.2; SD=31.3). For the comparison group, the increase in construct 3 was more limited than that of the experimental group from the pre-test ($\bar{x}$=14.5; SD=2.67) to the post-test ($\bar{x}$=14.88; SD=3.27).

8.3.2 Difference in results within the experimental group

The Wilcoxon signed-rank test was used to compare the constructs in the experimental group between the pre- and the post-test. The test statistics (Z) and *p*-value for the three constructs are presented in the tables below.

Table 8.4

Test statistics for construct 1

n = 10
Z = 15
p = 0.39

Table 8.5

Test statistics for construct 2

n = 10
Z = 46.5
p = 0.52

Table 8.6

Test statistics for construct 3

n = 10
Z = 29
p = 0.439

A Wilcoxon signed-rank test showed that for construct 1, a statistically significant difference was evident (*Z*=15, *p*=0.39) in maternal attachment behaviours after exposure to the parenting programme. The test statistics for construct 2 (*Z*=46.5, *p*=0.52) and Construct 3 (*Z*=29, *p*=0.439) indicate that the parenting programme did not elicit a statistically significant change in maternal behaviours between the pre- and post-test.

8.3.3 Difference in results between experimental and comparison group

The results based on the Mann-Whitney test are presented in the following tables.

Table 8.7

Test statistics for construct 1

n = 18
Exp. mean rank = 8.9
Comp. mean rank = 10.25
U = 46.0
p = 0.59

Table 8.8

Test statistics for construct 2

n = 18
Exp. mean rank = 10.55
Comp. mean rank = 8.19
U = 29.5
p = 0.35

Table 8.9

Test statistics for construct 3

n = 18
Exp. mean rank = 10.9
Comp. mean rank = 7.75
U = 26.0
p = 0.21

From the results in Tables 8.7, 8.8 and 8.9, it can be concluded that at the post-test level there was no statistically significant difference between the experimental and comparison group.

8.3.4 Discussion of quantitative research findings

For all three the main constructs measured in this study, namely maternal sensitivity, maternal interactive style, and maternal feedback, no statistically significant differences were found between the pre and post-test scores of the experimental group who were exposed to the developed programme. In addition, no statistically significant differences between the post-test scores between the experimental and the comparison groups were found. Therefore, no change could directly be ascribed to the attachment-based programme.

The findings could be attributed to the fact that the video recordings utilised for the pre- and post-test measurements were too short to clearly observe maternal attachment behaviours. Other studies observing mother-infant behaviours are based on longer video observations (up to one hour) (Datler, Hover-Reisner, Furstaller & Datler, 2014:279). Another factor which may have led to the variance could be the sample size being too small to clearly ascertain the quality of maternal attachment behaviours. Toddler attachment behaviour studies as conducted by Pallini and Laghi (2012:158), using the Attachment Q-Sort and questionnaire measurement methods found that a sample size of 72 toddlers between 20-36 months was not large enough. The researcher's subjective interpretation of maternal sensitivity may also have had an impact on the scoring. As mentioned in Kothari (2004:97), non-controlled observation has the limitation of the researcher's subjective interpretation of observed phenomena, which can be problematic. However, it was attempted to counter researcher subjectivity in this study by making use of an independent observer.

In terms of the observations, research has highlighted the fact that a child's age may affect a mother's interactive style (Hirschmann et al., 2011:308). This is a variable to consider as the infants' age in the mother-infant play sessions 6 to 18 months, may have affected the maternal attachment behaviours of the mother participants. As an example, maternal feedback is an important behaviour facilitating a positive self-perception and impacting a child's internal working model (Hirschmann et al., 2011:308). It might be that the age of the infant child will influence the nature and frequency of maternal feedback. In this regard, the aspect of standardisation which is defined as formalising data in research in order to build generalisations with some degree of accuracy, could be considered (Hirschmann et al., 2011:308; Kothari, 2004:97). Although the play interactions for the play sessions were less structured, the same play materials and environment were used for both pre and post-tests so as to eliminate the effects of extraneous variables. For future play sessions, it might be considered to provide a standard set of instructions for play during the sessions to provide consistency.

Generally, the video recordings for both the experimental and comparison group were of high quality with both mother and infant being audible and visible. In the comparison group, at times, the mother or baby moved out of view of the video image. In order to observe and rate maternal behaviours accurately, it was important to have the mother and infant in full view to observe all facial expressions, gestures, body language and the accuracy of the communication. Other studies involving the measurement of mother-infant interaction using video recordings that were conducted by Gunning, Conroy, Valoriani, Kammerer, Glatigny-Dallay & Murray (2004:39) have ensured that a mirror is placed next to the baby so that interactions can be filmed from behind the mother's shoulder in order to include the infant's face and body, as well as a full facial reflection of the mother (Gunning et al., 2004:39).

A larger sample with greater cultural diversity is suggested in order to assess the moderator variables of the indicators more extensively (Madigan et al., 2013:390). More than one independent observer who has relevant training and expertise in the field of parent-child attachment is recommended, in order to control any possible researcher bias (Kothari, 2004:97). This would increase the reliability of the observations, which are affected by the training and experience of the observer and independent observer (Strydom et al., 2011:483). These initial results should be used as a guide to select procedures of measurement and further refine them in order to standardise the measuring instrument across diverse cultures.

The programme may not have elicited a statistically significant change as it was a short four-session programme. The time span between the pre and post-test was six weeks, which may have affected the potential for change. Programmes of a longer duration could lead to more significant changes in maternal attachment behaviours.

8.4 QUALITATIVE RESEARCH FINDINGS

In order to gain descriptive feedback on the attachment-based programme, semi-structured interviews were conducted with the participants from the experimental group and two participants from the comparison group who requested to provide their feedback after they completed the programme and the quantitative post-test. The feedback can be utilised to assist the researcher to refine the programme which is, as mentioned, not part of this study. The themes and sub-themes that were identified in the thematic analysis of the transcripts of the interviews are indicated in Table 8.10 below.

Table 8.10: Themes and sub-themes

Theme	Sub-theme
1. Participants' understanding of attachment (after attending the attachment-based programme)	1.1 Attachment is an automatic, innate connection between mother and infant 1.2 Gentle responsiveness to a child is important 1.3 Gaining awareness and understanding of attachment
2. The influence of culture on parenting behaviours	2.1 Culture affects parenting practices 2.2 The role of acculturation
3. Single versus multiple caregiving	3.1 The importance of maternal care 3.2 The focus on multiple caregiving arrangements and extended family members
4. Heightened awareness of behaviours related to sensitive care	4.1 The attachment figure as a secure base 4.2 The importance of communication with the infant 4.3 The importance of play
5. Learning and growth as a mother	5.1 Different areas of learning 5.2 Being a good enough mother 5.3 Identifying with mothers of different cultures 5.4 Parenting styles
6. Self-understanding and self-care	6.1 The influence of past attachments 6.2 Emotional self-regulation 6.3 The impact of adverse conditions and lifestyle on mother-infant attachment
7. Suggestions for improving the attachment-based programme	7.1 Medium of instruction 7.2 The use of technology 7.3 Length of programme 7.4 Socio-cultural norms related to self-disclosure

The above-mentioned themes and sub-themes are discussed and supported with verbatim quotes by the participants. The research findings will furthermore be reflected upon and discussed with integration of relevant information from literature.

8.4.1 Theme 1: Participants' understanding of attachment (after attending the attachment-based programme)

The participants were of the opinion that they acquired a deeper understanding of the meaning of attachment from the programme. They realised that attachment is based on an innate connection between mother and child, that gentle responsiveness from the mother is important and they mentioned that they gained a greater awareness and understanding of attachment. These aspects are subsequently described as sub-themes.

Sub-theme 1.1: Attachment is an automatic, innate connection between mother and infant

Most of the participants spoke of having an understanding of attachment coming from within as an intrinsic, automatic process, whilst their actual understanding of attachment practices was limited. This is discussed in the following quotes:

- "I think that we do have that instinct to take good care of our children and to be attentive and to bond with them." Participant 5 (White mother)

- "Maybe it's a generational thing but I feel as a mother instinctively that you take on the role ... You become a mum. I always tell my friends your gut feel will tell you what you need to do." Participant 9 (Xhosa mother)

- "So, I think I had less of an appreciation for how conscious you need to be, I'd almost kind of take for granted that it's just an automatic thing, that the bond will just be there, you know. You're there, baby's there, there'll be a bond." Participant 4 (White mother)

- "We don't name it (attachment) to create a foundation but that's what we were taught in that first three months, especially when you live with your mum, the aunts and stuff. So, it really brings the importance of physical touch to light." Participant 16 (Sotho mother)

The participants highlighted that the process of attachment is natural for them and one which they enjoy. They however voiced being unaware of the important, positive impact of attachment and that the programme was useful in terms of creating this awareness.
Initial attachment theory is based on the understanding that attachment occurs as an innate intrinsic drive between mother and infant. John Bowlby applied ethological theory to the understanding of the human infant caregiver relationship (Minde et al., 2006:546). Bowlby's argument stated that the attachment behaviours of babies, such as babbling, grasping and crying are built-in signals that encourage proximity to the parent to be physically close and look after their baby (Bick & Dozier, 2013:95; Keller, 2015:179). This proximity between

mother and infant allows the infant to reach optimal growth through feeding, protection, affection and stimulation, ensuring the survival of the infant (Minde et al., 2006:546).

Sub-theme 1.2: Gentle responsiveness to a child is important

Most of the participants reported the importance of sensitive care in their culture. They spoke of the act of sensitive nurturing in child rearing as being valued. This is evident in the following quotes:

- "And you can see that other people from different backgrounds coming out of different types of households and realising that we can all apply this (sensitivity). It doesn't matter whether your upbringing was different or whether you had a good or a bad upbringing." Participant 5 (White mother)

- "When it comes to time with the baby. I know there are distractions but I think you always should try and be as engaged as possible and as present when you're with the baby and be patient ... I mean certainly what was passed from my mom down to me was very much fostering of physical contact with the baby." Participant 4 (White mother)

- "... I think it is very important for me to spend so much of time with her, because as a child if you remember in our sessions, I didn't get that. So, like I said, I overcompensate. I overcompensate and so yah, I want to be there not only physically but emotionally for her as well." Participant 1 (Indian mother)

- "Well, with motherly care, when the baby does something wrong, I will not be strict and firm … not harsh, not in a tone of voice that you'll break your child down." Participant 6 (White mother)

- "Yes, so that putting them on our backs is very important. But often we comfort the child so, if the child is crying we put them on our backs to get them to keep quiet, be comforted and also to help them to sleep. Most children in our culture will sleep on the back and then be taken to bed." Participant 16 (Sotho mother)

- "For me, I've grown up with everybody playing a lot so, it's expected of me to play a lot with my baby and spend that time with him. I love to do that. I love to be on the floor with him when he's playing." Participant 2 (Indian mother)

- "Well, I think with affection, a lot of smiles and affection. Open arms so, body gesture – with open arms and a smile on your face ... Yes, to interact with the baby and make sure what's bothering the child. Find out so, affection is very important in our culture." Participant 18 (Luba mother)

The research findings indicate that the participants could associate themselves with the concept of sensitive care, as presented in the programme, regardless of their cultural group. A central theme, in this regard, was that the guidelines provided in the programme were comparable to the values related to child care that they experience in their own cultures. Sensitive care is considered to be a universal attachment behaviour viewed as significant by most cultures, the expression of which differs based on cultural influences (Bain, 2014:593).

The programme presented information on the importance of responsive, sensitive care in terms of creating a safe, warm and facilitative environment for the infant to explore and feel she can return to the gentle response of the caregiver. Certain activities such as talking, playing and touch were discussed in terms of sensitive care. The participants said that physical contact (carrying baby on back and touch), spending time, playing and showing affection through body gestures, are important aspects of sensitive care in their cultures. As shown in the literature, a sensitive 'touch' evokes bio-behavioural aspects of secure attachment, influences the development of the amygdala in the brain, and enhances the infants' exploratory system, while reducing anxiety (Cozolino, 2010:58-59). The programme therefore reinforced the important effects of sensitive care on the general development of infants, heightening the participants conscious awareness of a sensitive approach. A greater understanding and awareness of a child's developmental patterns, and an increased realistic knowledge of what a child is capable of doing at a particular age, has also proven to reduce harshness in younger mothers (Mayer & Whiting Blome, 2013:146). When mothers are made more aware of a child's behaviour such as crying not being intentional nor hostile in nature, greater sensitivity develops. Heightened conscientisation thus leads to more sensitive parenting and is a significant theme to be considered in attachment-based early intervention programmes (Mayer & Whiting Blome, 2013:146).

Sub-theme 1.3: Gaining awareness and understanding of attachment

All the participants expressed a deeper, overall understanding of the importance of day-to-day attachment practices as a result of attending the programme. The participants explained that they knew little about attachment in general before the programme and did not recognise the utmost significance thereof in the healthy development of their babies. Participants found the knowledge gained from the programme crucial in assisting them to be more aware of their own attachment behaviours. The following quotes demonstrate this aspect:

- "I don't think I really gave attachment all that much thought; I think I started thinking about it more after the programme ... And I think that awareness is great. I mean like I say, I never really thought about it before the time ..." Participant 3 (White mother)

- “I didn’t know much about it at all. I know that it’s important, like I did read some stuff about the trying it out and leaving babies who are unhappy, and I read that that’s not good. So, I think I did understand, you know some of the bits, some of the basics behind it but I’ve never heard the term attachment before. I never knew, I suppose, exactly why attachment is important because I don’t think anything you said was new. It’s not like I didn’t know that I’m supposed to pick him up ... We, yah, we have those instincts but we don’t, because we don’t know how important it is we don’t emphasise it enough” Participant 5 (White mother)

- “I wasn’t as observant or aware of how my actions would impact the baby. So that’s the biggest thing, really. So now, after I joined the programme, I’m more aware of what I’m doing and also kind of observing how she responds and if she’s looking at me or not. So, I’m more aware and learnt now how are things.” Participant 9 (Xhosa mother)

- “So, I didn’t have such a deep understanding, I think inherently I had but if I would have put it in words, I wouldn’t have done it the same way as after the course. There’s a lot of moms who don’t realise how important it is and they don’t spend the quality time with their children and don’t make a priority of, you know getting that attachment with their children in the first few years. Predominantly because I don’t think that they know how.” Participant 6 (White mother)

- “I wouldn’t really describe it (knowledge about attachment) as nothing. I didn’t know that attachment – there was a thing called attachment, if you raise a baby in a certain way. If you maybe raise a baby in another certain way, the attachment would differ – I just didn’t know. I didn’t know the importance of attachment as well.” Participant 7 (Swazi mother)

- “Looking at the baby in the eye, talking to the baby, how to play effectively and how to bond (can raise) a lot of peoples’ consciousness because I don’t think this is general knowledge for everybody. Especially, I believe that moms who are busy, career moms. I think a lot of career moms take it for granted that there’s still a real conscious effort you need to make. That it won’t take care of itself that your baby will bond, and these things just happen. I’m seeing that a lot even with my peers, even black people who know these things but they are very happy to outsource it to their families. I think they need to have that brought to their attention.” Participant 16 (Sotho mother)

Two aspects regarding information gained from the attachment-based programme are highlighted by the above quotes. Firstly, the participants indicated that the programme

helped to raise their awareness of their own caregiving behaviours. Furthermore, the participants mentioned that they, and probably other mothers, did not realise the importance of the development of a secure mother-infant attachment bond. Some participants mentioned being unaware of the term attachment, and that career mothers take for granted the conscious effort they should make to attach to their infants.

Greater awareness of own practices can be related to the concept of mentalisation. Mentalisation can be defined as a process of encouraging the mother to think of her problems with her infant symbolically (Aspoas & Amod, 2014:582; Holmes & Slade, 2018:61). The New Beginnings (attachment-based) programme run in South Africa included much learning about attachment by means of mentalisation and reflection (Bain, 2014:594; Holmes & Slade, 2018:61). The New Beginnings programme facilitated the mother to improve her ability to understand her infant's needs, and acknowledge her infant's separateness, while increasing her range of responses. The mother was made more aware of her own emotional state and her infant's emotional state and how to manage them (Bain, 2014:594). The Baby Mat project run in government clinics in South Africa also focuses on heightening awareness of attachment by using basic psychoanalytic principles, such as attachment theory and mentalisation, and encourages caregivers to think about their relationship with their infants symbolically. The aim is to facilitate reflection and to teach caregivers how to interact with their infants (Aspoas & Amod, 2014:582). Evidence-based group parenting programmes in England have been proven to lead to improved parenting skills and well-being, together with enhanced social and emotional development of children (Cullen, Cullen, Lindsay & Strand, 2013:1027). Heightened consciousness through attachment-based parenting programmes appears to enhance learning and awareness of the paramount importance of the parenting role on the development of attachment, and to more careful conscious effort and sensitivity when engaging in parenting practices. Therefore, it can be concluded that heightened awareness could lead to mothers becoming more mindful about their attachment behaviours.

In theme 1, the participants mentioned that the information on attachment and sensitive care that was presented in the programme was consistent with their beliefs about caregiving. It appears that their socio-cultural background could, however to a greater or lesser extent, influence their caregiving behaviours. This is discussed in theme 2.

8.4.2 Theme 2: The influence of culture on parenting behaviours

Some of the participants were of the opinion that caregiver behaviours in their own families and communities were influenced by their cultural context. Others mentioned that acculturation would lead to parents adopting a Western view on childrearing. These aspects will be discussed in the two sub-themes of this section.

Sub-theme 2.1: Culture affects parenting practices

Some of the participants explained that caregiver attachment behaviours are most likely influenced by one's culture, particularly concerning beliefs and practices related to discipline and parenting behaviours. The data gained on this sub-theme reflect two opposing views: those participants who explained that caregivers were expected to engage in high levels of interaction with the infant, and those participants whose beliefs about caregiving did not reflect this view. The participants, who supported prompt responding to infant cues and high levels of caregiver-infant interaction, mentioned the following:

- "Well, we are taught to always speak to the baby. So, even as an infant we talk to the baby a lot. We sleep with them in our beds while they're infants and we do the practice of putting them on our backs a lot." Participant 16 (Sotho mother)
- "I've seen my gran how she talks to us all the time so, yes, I think it is quite predominant that we talk a lot to our kids. So, they do communicate from early." Participant 2 (Indian mother)
- "Well in our house, well play is very important. To me it's like we think of nice toys, he's got a sandpit in the garden and a bike that we push him on and balls to play with and blocks to play with and we spend a lot of time playing. And in our culture, I think, yah I think it is important." Participant 5 (White mother)
- "But for us in our household I definitely ... we definitely speak to her. You just talk to her even if she babbles." Participant 1 (Indian mother)

Participants, who had different beliefs to the above, expressed the following opinions:

- **"**Afrikaans people are very strict and very conservative. So you tend to keep your children there (within the rules) and that's definitely a thing we can change in our culture. You know, make a stronger bond between the whole family ..." Participant 6 (White mother)
- "You only pick the baby up when there's a reason to pick up the baby. Otherwise the baby has to stay there. You have to do your chores and all of that. The only reason you have to pick the baby up is if the baby is crying, maybe she wants to nap, or maybe wants to eat, or make a poo-poo ..." Participant 7 (Swazi mother)
- "Sometimes you know the baby, they just cry for nothing. Like me, when she's crying at home and she's crying for nothing – I just leave her for a few minutes and after that I will pick her up." Participant 10 (Zulu mother)

Research has found that classic attachment theory overlooks the influence of culture on parenting practices, as studies have focused more on clinical experiments in a

laboratory type setting (Keller, 2015:177; Vicedo, 2017:5). More recently, the important influence of cultural practices, norms and values have been considered and the single approach to understanding mother-infant attachment has been critiqued, as other external influences in the natural environment are not considered to have an effect on mother-infant attachment (Mckenna, 2009; 71-72; Vicedo, 2017:7). Furthermore, cross-cultural developmental psychology research in the 1980's was still not sufficiently integrated within attachment research (Vicedo, 2017:7).

More recent anthropological research in developing world contexts has found a myriad of socio-economic and socio-cultural contextual influences affecting maternal attitudes, emotions and behaviours (Mckenna, 2009:36; Vicedo, 2017:9). It has been found that parent's socio-cultural contexts affect their goals in child rearing, and their practices along with their emotional involvement with their children (Vicedo, 2017:10). This literature is validated by the participants in this study, who highlight the influence of culture on their attachment behaviours when discussing their belief in high levels of interaction with their babies. The participants discuss co-sleeping and carrying their babies, as well as being taught to play and speak to their babies, as being culturally influenced. In terms of those participants who believed in less intense levels of interaction, they expressed being strict and conservative, not picking the baby up for no reason, and leaving the baby to cry if crying unnecessarily, as being culturally influenced. This study therefore highlights the significance of the influence of culture on parenting behaviours. The content of the programme also included the influence of culture on parenting behaviours which lead to much discussion amongst the participants. Due to migration, the diffusion of cultures is evident in the following sub-theme.

Sub-theme 2.2: The role of acculturation

Some mothers spoke of how their cultures have become enmeshed with the Western culture in which they live. The mothers talked about how their parenting practices, and the role of fathers and helpers, have been affected by acculturation, in that they no longer follow traditional cultural norms and practices in their child rearing due to urbanisation. A number of the participants mentioned the involvement of their husbands (the baby's father) in the raising of the child. The participants spoke of acculturation leading to fathers now engaging more in bathing, feeding and playing with their babies than in the past, and sometimes even being as actively involved as the mothers in the raising of their infant babies. This has become more prevalent for parents living in urban areas. The following quotes illustrate this sub-theme:

- "But it's not really a huge difference because it's not like we do cultural stuff as a Xhosa woman all the time, right ... So obviously your children will be

raised now in the Westernised culture because we're much more Westernised now. So we raise our kids in the Western part, so when you go back home maybe to the villages and then you do those kinds of cultural rituals that you do, but in your daily, you know happenings it's just a normal... home you're Western." Participant 9 (Xhosa mother)

- "And then obviously some of the things, for me some of the things you would say I did as the mother probably eighty percent of the time and then when I'm tired then daddy takes over... But I mean you've got other helpers, if it's not mum then the dad will take over." Participant 9 (Xhosa mother)

- "And dad plays a very important role. His time spent is slightly less but it's, he's there for all the important stuff." Participant 4 (White mother)

- "You know, dad tends to do the playing with toys inside, so I like to give a balance by playing outside in the sandpit, in the vegetable garden, so just to have a good balance." Participant 6 (White mother)

- "But you find that when these boys grow up and become a man they're exposed to a lot of information so, they turn out to be different from what they were taught. But some still follow that culture route, but some they just change and become loving and attentive, and all that. Like my husband is more involved ..." Participant 7 (Swazi mother)

- "But we're living in modern days now so, my husband is helping out but we are not so inclined or strict to our culture as if we were back in the country – maybe that would be taboo, a husband helping out here and there." Participant 18 (Luba mother).

In South Africa, there have been many political changes since 1994, which have brought many Black South Africans into urban areas in pursuit of a better education and employment (Atmore, 2013:152; Hayem, 2013:81-83). These modern changes have led to Western influences on traditional cultures, leading to the acculturation of many cultures in the process of adaptation and change into the new South Africa (Atmore, 2013:154). These processes have influenced parenting practices, as is mentioned by the participants above. The participants express how their culture is more modern in urban areas than in the villages, and that this leads to a change of values, such as gender roles. Participants said that fathers play an integral role in taking physical care of their children and playing. Research has confirmed the increased influence of fathers in child rearing in modern times (Arnett, 2016:233; Combs-Orme & Renkert, 2009:396). Due to acculturation, male and female gender roles have adapted and changed, leading to men becoming more involved and active in nurturing their children sensitively (Combs-Orme & Renkert, 2009:396; Smith et al.,

2011:135). A few of the participants from the programme voiced the important difference that fatherly support made for them as mothers to cope as caregivers.

Due to modernisation and urbanisation, women from diverse cultures depend on the support of their helpers in child raising while they are at work. Some participants expressed how helpers often spend more time with their children than they do and recognised the significant role helpers play.

- **"**I suppose in terms of practically speaking there's nanny as an important caregiver also just from a working perspective." Participant 4 (White mother)

- "I was happy to note that, because in my busy lifestyle, my daughter is with the nanny most of the day, and it was good to know that I don't need to give more than 30% of my time to actually maintain that bond." Participant 16 (Sotho mother)

- "Oh, yes, I think focus on the mother or caregivers that it's fine to have a caregiver because also in my culture some women are like 'oh, you have a caregiver,' or 'you're letting someone else take care of your child or helping you out,' it's like you can't cope. So, I think just emphasising on that that it's fine to have someone helping you out, like a caregiver or some women … In my culture, like I know my mom ... her job was just to take care of us and she just stayed at home. But no, you can juggle everything – you can juggle and that you're not alone in it so, yes, that would be nice to highlight." Participant 18 (Luba mother)

- "Yes, so she plays on her own quite a lot, she's at home with the nanny during the day and obviously the nanny has her own job to do as well ..." Participant 3 (White mother)

Across many cultures, modern life has had an overwhelming influence on child rearing practices (Berk, 2013:441-442). As a consequence of women becoming professional working mothers, modern forms of support in child rearing are often relied upon (Smith et al., 2011:130-131). Due to acculturation, such forms of support are not always understood and accepted by traditional cultures, as was voiced by participant 18 who felt guilty when seeking assistance from a helper. It is important to note that all the participants live in an urban Western context and voiced being happy to use a helper in the absence of the traditional grandmother or extended family members. Studies have shown that, at times, differences within a culture are larger than differences between cultures (Louw et al., 2007:15). The rural Xhosa or Zulu woman might have different child rearing values and attachment practices to a mother living in an urban area. The assistance of a helper could therefore be acceptable for an urban Xhosa mother, but not for a rural Xhosa mother, as expressed by the participant in the programme. Therefore, acculturation is shown to play an important role on caregiving practices.

Based on this theme, the opportunity for reflection on cultural aspects that could influence attachment would thus be appropriate for a programme in a multicultural context such as South Africa. Such reflection on cultural aspects that could influence attachment would also be appropriate as a result of different practices within one culture because of acculturation.

8.4.3 Theme 3: Single versus multiple caregiving

The theme reflects on the participants' view of the mother being the main caregiver and the role of the extended family in caregiving**.** As the quotes highlight, the extended family play an important role despite the participants living in urban, Westernised contexts. The importance of maternal care was accentuated by most of the participants and is the first sub-theme to be discussed.

Sub-theme 3.1: The importance of maternal care

According to the participants across all represented cultures, the mother is considered to be the most important person in taking care of the infant. It became apparent that along with modernisation and urbanisation, the mother is still most integral in the actual attachment practices of taking care of the infant. This sub-theme was evident in the following quotes:

- **"**The mom. Yah, look I mean it's, I think things have changed, so men are a little bit more helpful but it's still ... still mainly the mom I would say." Participant 3 (White mother)

- "Yes, there's a reason though for that because you find that maybe in the rural areas ... the fathers might work so they would leave the woman at home to raise the kid and take care of the home. So they were not working and also because the mothers are not educated as the fathers or the jobs that were there were not appropriate for women." Participant 9 (Xhosa mother)

- "... you know in our culture like I said, it's the mother's job to look after this child. It's the mother's job to be emotionally stable. It's your job for your child to be emotionally stable." Participant 1 (Indian mother)

- "Yes, normally when growing up most black boys they're taught that they have to work and the women are the ones who are supposed to nurture the children and stuff. Like in our culture that's normally what happens." Participant 7 (Swazi mother)

- “I don’t want him to grow up as a typical Indian kid or Indian boy who is pretty much just mummy’s boy and he does nothing. I want him to grow up knowing, being open.” Participant 2 (Indian mother)

- “The mother. The women in general but the mother or if you had the aunty there but the mother mostly. If you’re married it would be the mother.” Participant 18 (Luba mother)

The focus on the mother as the main caregiver supports a focus on the mother-infant dyad and maternal attachment behaviour in the programme. It has become clear through research studies that although multiple caregiving arrangements dominate in the developing world, a mother still carries responsibilities and acts in ways that keep her most strongly connected to her infant (Berk, 2013:433; Keller, 2015:182). Alloparenting in such communities assists and supports mothers to still do their domestic activities but does not withdraw the maternal connection from her infant (Keller, 2015:182). As mentioned by the participants, although the mother has assistance, her role as the main carer of the infant still prevails. Another participant mentioned how the maternal caregiving role is even stronger in the rural community, where men work while women stay at home with their children. Despite the effects of modernisation, it becomes apparent that women are still considered to be the main attachment figures, but the extended family is still relied upon in many ways, as is described in the next sub-theme.

Sub-theme 3.2: The focus on multiple caregiving arrangements and extended family members

It became evident that many of the participants still enjoyed the involvement of the extended family in child rearing. The extended family offer support and physical assistance and carry much influence, which is of great value to the mothers, as illustrated in the following quotes:

- **“**Because for me I had, okay my first child, my mom took care of him, I left him with her. But we were ousted; my mom was staying in the townships. I stayed with my mom for a while and then I left my kids when I went back to work. I left him there, because she was more comfortable, and I was more comfortable with her taking care of him than me taking him to a day-care too early or getting a helper.” Participant 9 (Xhosa mother)

- “Okay, so in most instances it would be the mom but the support structure amongst the women is very strong so, it’s my mom, and my aunt – they are very present.” Participant 16 (Sotho mother)

- “My first child it was my mom. My mom was helping me to look after the baby. The second one, when I delivered the baby, my mother-in-law was also here to help me.” Participant 10 (Zulu mother)

The involvement of the extended family was more specifically mentioned by participants from Black ethnic groups. Multiple caregiving arrangements by extended family are more common in many non-Western cultures, with such arrangements leading to crucial physical and financial support in child rearing (Arnett, 2016:175; Keller, 2015:182; Robinson, 2007:142). From an evolutionary perspective, extended family support has led to the survival of humankind (Louw et al., 2014:14). The belief in multiple caregiving by extended family dominates across African countries and has been proven to be deeply embedded within African cultures (Keller, 2015:183). As is mentioned by some of the African participants, the grandmother (on both sides) still plays an integral role in child raising. Another participant mentioned that work has an important effect as some mothers choose to leave their child in the rural areas with their mothers rather than place their child in day-care with a stranger. The programme focused on how important it is for working mothers to find opportunities to form a secure mother-infant attachment despite the child being in the care of the extended family for long periods of time. The importance of quality time with regards to play and touch, as well as consistency in terms of being sensitive and setting limits between the mother, other caregivers and the child was discussed. The research findings indicate that the aspect of multiple caregivers is relevant to an attachment-based parenting programme in the South African context.

8.4.4 Theme 4: Heightened awareness of behaviours related to sensitive care

Participants commented on maternal attachment behaviours which they regarded as significant learning experiences offered during the programme. A number of behaviours related to sensitive care shall be discussed in this section, namely the attachment figure as secure base, communication and play. The importance of secure base behaviour is discussed first.

Sub theme 4.1: The attachment figure as a secure base

Some participants spoke about their deeper understanding of having a warm, responsive reaction when their child returns to them after exploring the environment, as discussed in the programme. The participants expressed feeling reassured that when their children explore the environment and return happily, they feel safe and experience comfort when returning to the mother and that is a marker of secure attachment. The programme included information on the secure base concept and videos (available in a public space) were presented to further clarify the concept. The following quotes demonstrate this sub-theme:

- “I liked the video that you showed us, the one with the (mother’s) open arms. Before I was like, why does this child always want to be with me? I couldn’t understand it really. I knew that I was the mom. But it clarified things a bit more when you explained the circle and the hands of the mother ... that’s their comfort zone, that’s their safety zone.” Participant 18 (Luba mother)

- “I feel like he’s way more attached to me. I don’t know if it’s such a great thing for both of us but like a lot of the time he cries for me or he wants me. He’s like that with his dad as well because his dad also made a few changes after I told him about the programme. So, I recognise that he looks for us for certain things like when he’s scared. He always did but now it’s more pronounced when I think about it.” Participant 2 (Indian mother)

- “It just reinforced it. It’s allowed me to really question these things in terms of who are the other people in the baby’s life who can build that secure base, the foundation for the child and just be more deliberate in the way that I do it or we do it as a family.” Participant 16 (Sotho mother)

It appears that the programme resulted in a greater understanding of the proximity-seeking behaviour of infants, as well as of the mother’s response to the infant. The secure base has been found in research studies to be a dynamic system existing between caregiver and infant (Gray, 2015:311; Holmes & Slade, 2018:17; Mercer, 2015:388). The secure base is activated by perceived or real fears or threats to safety which lead to the infant seeking proximity to the caregiver. Once the infant feels safe, the dynamic system is deactivated. If a secure base is formed by means of sensitive behaviours, the infant will be confident to explore the environment and return to the mother (Marvin et al., 2002:107). This secure base operates as an attachment system throughout life at all stages of development (Holmes & Slade, 2018:17). The quality of maternal feedback affects the formation of a secure base. The infant learns that she can explore and return to a responsive, warm and sensitive caregiver when threatened if the caregiver adjusts her responses to reach a balance between allowing for exploration and proximity when distressed (Holmes & Slade, 2018:17). The programme participants spoke of becoming more consciously aware of the secure base behaviour of their infants, as a result of the programme. In the second sub-theme, the art of gentle, sensitive communication between mother and infant is discussed.

Sub-theme 4.2: The importance of communication with the infant

The participants voiced their heightened awareness of the importance of communicating with their babies, be it verbal or non-verbal, after discussions of this aspect in the programme. They said that they were unaware of just how much their babies were trying to

communicate with them. The video of the Still Face Procedure (Conradt & Albow, 2010:252) seemed to add much insight to the importance of communication for the participants. The following quotes demonstrate this point:

- "Well I think that they understand more than we think, so I try to tell him what we're doing, where we're going, what I'm doing. And also, I know that for, just for communication, language development, he's got to hear lots of words. So, I try to even talk to him sometimes ... To put away your cell phone, switch off the TV and speak to him. Sometimes you are tired and just want to sit on the stoep (porch/veranda) and you don't feel like saying anything but then you just give him the attention." Participant 5 (White mother)

- "And also, in terms of I mentioned communication, you know between me, myself and my husband to say, this is how you know, we should do this, watch the videos and we communicate and make decisions based on how we raise the kids." Participant 9 (Xhosa mother)

- "It's easy to fall into that trap and I think I've been far more conscious now, the TV's off all the time, the phone goes in the boat (stand), dad and mom put the phone in the boat and until she goes to bed; it's her time and we engage with her... you can lose sight of that because you think well, we're all sitting together, sort of give her dinner on the side whilst the TV's on and it's not good enough. So, we've definitely taken that lesson." Participant 4 (White mother)

- "Yes, sometimes it happens … (I am) on my phone or my laptop at home and I see she's trying to follow me like we saw in the video when children are trying to reach out. I notice her at that point and when I do drop what I'm doing; you can tell that this person is already communicating." Participant 16 (Sotho mother)

- "Yes, absolutely, and that's one of the things that it showed me and the other thing is that the communication – I notice like now, I think I talk, if that's possible, I talk more to him. We talk a lot, yes. I talk more to him. I've told my husband also certain things about the programme and I see he's made some changes as well communicating with the 'why's' and not just the 'no's.'" Participant 2 (Indian mother)

The participants spoke of being more conscious of talking and focusing on the baby after attending the programme. They spoke of the impact of obstructions to communication by means of the phone or laptop, and how they now make a deliberate effort to avoid the intrusion of technology. The general aims and goals of early intervention programmes are based on developing an increased resilience within the child and parent-child relationship,

and on improving the parent's skills in communicating and listening to their children clearly and consistently (Cullen et al., 2013:1031). In so doing, the general well-being of the child is enhanced across all contexts in which the child functions, enhancing the child's attention span, social skills, and general development (Cullen et al., 2013:1031). As demonstrated, the programme participants particularly spoke of their enhanced communication skills and heightened consciousness of verbal and non-verbal communication with their babies. Mayer and Blome (2013:145) found that teenage mothers who participated in a structured parenting programme where more sensitive and responsive, and less controlling with their babies than those mothers who had not attended a programme. These mothers showed a greater tendency to support their child's language development. Language skills are often included as an important section of the curriculum in early intervention programmes, such as in the Partners for Learning Curriculum (Wallander, Bann, Biasini, Goudar, Pasha, Chomba, McClure & Carlo, 2014:1253). Communication with ones' baby leads to heightened interaction and engagement and is an important parenting skill to cultivate in order to develop secure mother-infant attachment.

Sub-theme 4.3: The importance of play

The participants indicated that they had developed a new awareness of the function and importance of play and of setting technology aside to spend time with the baby, as a result of attending the programme. Work and domestic chores had often interfered with them being able to focus on their babies. However, they developed a new recognition of the importance of delighting in their babies and trying to dedicate quality time to them. The participants stated that they learned new ways of attaching to their babies through play. They spoke of going down to the infant's level, touching, becoming more aware of having to change one's behaviour, and of play being both verbal and non-verbal. One participant indicated that she became aware of following her baby's cues more accurately when playing. This sub-theme is depicted in the following words of the participants:

- "... the secure attachment so, how to play, how to make sure that you communicate and it's not just verbal communication. It's the non-verbal communication and understanding him. So, that was the most beneficial for me because I've noticed those cues. I don't think there was anything I didn't benefit from." Participant 2 (Indian mother)

- "There was one thing that stood out for me and that's, you said that we must you know, go down to their level and I think that, that stood out for me. So now when she's playing like it's on the floor, I play with her. It's made me sort of just appreciate what she's doing a lot more and try and be a lot more present with what she's doing as well." Participant 3 (White mother)

- “When we do spend time together, I try to make it better quality time. We do spend lots of time together, me and him because of the way that my work is set out.” Participant 5 (White mother)

- “Playing also, we sit, we play ... because at this age she’s very observant and very interested in a whole lot of things. So, if she touches there, you touch there, so you should not really control them and say, as long as the place where they’re playing is safe. But they should obviously be touching and exploring a lot of things, yes.” Participant 9 (Xhosa mother)

- “... so engaging more without having the TV on and all of that, she definitely plays more with us. That awareness, the awareness to change your behaviour and create that attachment bond.” Participant 4 (White mother)

- “I think play is really important; you get to interact with your kid. You also find that, because I didn’t really have someone to play with, I didn’t have siblings you know. I didn’t know what it was to grow up with, to play with someone. So you find yourself still going back to that childhood, you find the child in you again.” Participant 1 (Indian mother)

The art of and importance of play was discussed in the programme under spending quality time with the baby and the participants had an opportunity to share their different cultural views on the matter. Sensitive care in the form of play has been found to positively impact the growth and development of the infant brain, as well as to enhance the mother-infant attachment relationship (Jennings, 2011:133). Learning by means of play is encouraged in many early intervention programmes, such as in the Partners for Learning Curriculum put together by Sparling and Lewis (1984), which involves teaching parents to engage in learning activities through playful interaction with their children and modelling such activities for parents during home visits (Wallander et al., 2014:1253). Fine and gross motor skills, incorporating play, are included in this programme (Wallander et al., 2014:1253). Theraplay, an attachment-based play therapy approach, introduced by Booth and Lindaman (1969), focuses on applying the art of playful interaction to facilitate a secure attachment between mother and child (Booth & Jernberg, 2010:19). Play is applied to encourage greater attunement, sensitivity, reflection, self and co-regulation in this approach (Booth & Jernberg, 2010:19). It appears that the programme created awareness of play as a way to enhance mother-infant attachment.

8.4.5 Theme 5: Learning and growth as a mother

Based on the feedback from the participants, there was learning and growth as a result of the programme in terms of self-understanding, heightened awareness and skills, leading to more intentional parenting, which is elaborated on in the following sub-themes.

Sub-theme 5.1: Different areas of learning

All the participants in the programme spoke of how much learning they had acquired from the programme, and how positive the experience was for them from a growth perspective:

- "Okay, firstly I learnt about bonding. Even though I knew how to bond. But you have to bond with the baby. Secondly, about the insecurity of the baby." Participant 10 (Zulu mother)

- "I think it's been very valuable for me and I've definitely taken like a permanent learning from it which is great ..." Participant 4 (White mother)

- "It's, you know it's really, really opened up my eyes on some of the things. I've really learnt a lot like I'm saying ... I really learned a lot, it really hit home ... " Participant 1 (Indian mother)

- "I can say it was, it was terrific for me, you know the balance that you have between everything just went well." Participant 6 (White mother)

Other participants highlighted specific aspects of the programme that they found thought-provoking:

- "How my past, my everything, and my current situation can affect my child and I think that, for me, was probably the most valuable thing that you take out of it because you think you had a hard day so, you think, 'it's okay to just be difficult that day.' You affect your child, so your child becomes difficult that day and that's what I learnt." Participant 2 (Indian mother)

- "One thing that I used to do before is that, there was many times that I actually just dismissed her you know … 'Just play, I can't focus on you now, I have to this, I have to do that.' And I changed that definitely. And I could see a change in her, she's more loveable, she hugs more, she kisses more, she's definitely friendlier ..." Participant 6 (White mother)

- "Paying attention to the child. I really pay attention. Like, knowing that the child will actually guide me on what she needs, what she wants, and what she wants me to know – I didn't even know that. I think I've learnt that." Participant 7 (Swazi mother)

- "It just reinforced it. It's allowed me to really question these things in terms of who are the other people in the baby's life who can build that secure base, the foundation for the child and just be more deliberate in the way that I do it or we do it as a family. For myself, it was mainly that I need to keep making the effort and not take it for granted that my child and I have bonded and stuff. Sometimes I do get so busy – a whole week will pass, and I haven't bathed my baby once that week and the nanny has been there the whole time and I think for me, it really makes it conscious to say look, I need to make an effort. Maybe bath the baby twice a week and to do deliberate activities, singing and playing with her is probably not good enough. We should have deliberate activities and say now we're bonding is something we do together to create that." Participant 16 (Sotho mother)

- "I learnt that you must be very kind to your baby. If you've got something – you mustn't be angry with her. You must talk to your baby." Participant 8 (Zulu mother)

- "So, for me when I came back it was okay, I understand now. I was a bit calmer when the child cries for me. It's not like this child just wants me, why can't I have a break? I understand now. You clarified that. I'm this child's safety, this child's place of comfort. It felt like I was a bit more understanding about it like when my son cries now and I understand that I am that safety. He feels comfortable. I'm the person he was in for almost nine months so, it was really helpful. I loved that programme – it really was like a bulb opened in my mind. 'Okay, now I get it.' I am a bit more patient and calm with my son." Participant 18 (Luba mother)

- "But I think that the value of the programme is to make it more intentional so that you're aware of how much you're doing it. And if you have a bad day or a bad week or a bad month that you're still doing it ..." Participant 5 (White mother)

A central aspect in the above quotes was the participant's awareness of their role in responding to the needs of their baby. In this regard the participants mentioned specific learning from the programme with respect to making a conscious effort to be available to interact with the infant and understanding the infant's needs for a secure base. Self-understanding was also stated as being important as mothers have to attend to their own emotions so that they can be 'good enough' mothers. Thus, participants spoke of becoming more intentional in their parenting by making the effort to do deliberate activities that facilitate bonding and secure attachment. Learning and growing as a mother can be considered to be the main goal of early intervention programmes (Cullen et al., 2013:1027). In South Africa, family outreach early intervention programmes involve family outreach workers engaging with parents and caregivers in their homes to encourage heightened parent-child interaction and learning through play, leading to skills development,

understanding, and a deeper insight into cognitive development, health, nutrition, child safety and discipline (Atmore, 2013:160; Wallander et al., 2014:1251).

Sub-theme 5.2: Being a 'good enough' mother

A number of participants said they were reassured by learning that they need to strive to be a sensitive and 'good enough' parent, at least part of the time. The participants spoke of feeling more confident and reassured through the learning and discussions, that they are at least coping, not alone in the experience and not parenting poorly. The assurance that there is no perfection in mothering seems to have made a considerable difference for a number of the mothers in the programme, as is clear in the following quotes:

- "... it's a healing process for other parents if they've gone through trauma and stuff to say you know what ... But now this little person is looking up to you, you know and it grounds you as well, you grow as a person." Participant 9 (Xhosa mother)

- "I came here clueless about what was going to happen and I left here with information. When you are empty and then you get filled up with information that is good enough for me." Participant 7 (Swazi mother)

- "He recently just started getting attached to me and the programme helped and I was a bit … like oh, my word, seeing all those other ladies and seeing what they also go through. I'm not the only one and I'm not a bad mum. When sometimes I just feel like leaving my child and just taking the day off, so there was a bit of reassurance and I thought, 'okay, I' m not a bad mum thinking that." Participant 18 (Luba mother)

Literature refers to the 'good enough' parent, stating that genetic and psychosocial factors play a role in child development. Therefore, if parents are at least 'good enough', then the child may still reach her optimal potential (Booth & Lindaman, 2010:69; Jennings, 2011:134; O'Connor & Scott, 2007:5). The potential for parenting programmes to lead to an increase in parenting confidence has been acknowledged by researchers, indicating that group dynamics have the potential to lead to parents feeling more competent through social support and help from others (Bohr et al., 2010:56; Cullen et al., 2013:1038). Participants are often grouped with a few parents in early intervention programmes so that they can learn from each other and share similar experiences and questions (Bohr et al., 2010:61).

Certain internationally applied attachment-based parenting programmes that have been validated empirically have found that programme attendance decreased parental distress (Bohr et al., 2010:56). Parenting confidence has led to enhanced parent-infant relationships

and infant development, as well as directly to heightened maternal sensitivity and engagement (Bohr et al., 2010:57; Cullen et al., 2013:1038). Thus, the reassurance of the current parenting approach is a positive factor enhancing the mother-infant relationship, evident in this intervention.

Sub-theme 5.3: Identifying with mothers of different cultures

All the participants in the programme spoke of the benefit of identifying and relating to the other mothers from different cultures which made them come to the realisation that they are not alone. The participants expressed that no matter what culture or class they come from, they all seem to experience similar difficulties and have similar questions. The participants mention in the following quotes how the multi-cultural group composition and group discussions were considered to be highly beneficial.

- "… another thing that you see, I'm not alone ... The problems that you think, no it's only African or Black women that suffer ... it's across board." Participant 9 (Xhosa mother)

- "I found them (the programme sessions) great. It's nice to also learn how other mums do things, just to make sure that you're not totally off-track ... so it was nice to be around people that are in the same position as you and the same stage as you and have the same fears as you." Participant 3 (White mother)

- "I think it was good to hear from different cultures because I also think we learn from each other. It's interesting to get the different perspectives as well because also, just sitting listening, I don't think you take in as much as you do when you actually have to say something. You have to now share it and have to apply it ..." Participant 5 (White mother)

- "I learnt about other cultures as well and, you know you brought in the white and the black. So, things that I didn't know, maybe things that they didn't know about our culture. I learnt a hell of a lot and I think it was quite diverse. So to come into a group and have other mothers speak about their experiences and then you feel you're not alone." Participant 1 (Indian mother)

- "You know with everybody sharing their own experiences and the videos and it was easy enough to understand. Yah, it was very nice to also get an idea of what the different cultures are like. Sometimes you think it's only you but then you'd realise it's just moms in general, they struggle with the same thing ..." Participant 6 (White mother)

- “You bring in a lot of women from different racial groups and I only discovered that a lot of us we are actually experiencing probably the same things about the babies and we hope and want the same things. So, we don’t really differ that much. There isn’t much difference from all us.” Participant 7 (Swazi mother)

- “I thought it was appropriate and even in the content of the programme I didn’t feel like this was a White people’s concept. I always look for that when I attend stuff if it’s like White people only talking and I’m like ‘mm,’ is this for black people, or not? The programme was good. It was deliberate. Even your programme’s logo is black people.” Participant 16 (Sotho mother)

- “We encountered different walks of life (people in the programme), so it was nice to get to know how someone else does things and what’s the expectations in their cultures. I didn’t know that in the black culture, for example, I didn’t know that it was acceptable that the gran always looks after them. I know that it was done but I thought the mother chose that and it looks like it’s not. It was, more or less, expected of you to allow the granny to have the child. But for myself, as well, I just think that because you had something in common with some of those women, or most of those women actually and I didn’t realise it. I think in your normal setting you don’t ever get to discuss that. I think because your normal friends they know you too well. Or your family, they know you too well …” Participant 2 (Indian mother)

- “I’ll report back honestly like the White culture – their husbands help them – they have it easy. Only the black cultures suffer, or their husbands don’t want to help out but after hearing these ladies I’m like, oh gosh, all men are the same. And they are going through the same thing so, for me, I really liked the interaction of the different races. If it was only a Black race then I was not going to have had an open mind about different cultures also going through this. Those different women in different cultures are also experiencing what I’m experiencing, and not just because of the colour of my skin or all that so that was really an eye opener. I even came back to my husband and I was like, ‘oh my word, white people are also going through this’, so it was really an eye opener for me.” Participant 18 (Luba culture)

The multi-cultural group composition of the programme leads to the participants learning specific things about other mothers, such as seeing that they are in the same position despite race. This also helped them to understand that attachment and bonding is important across all cultures. The participants also displayed a deeper understanding and sensitivity toward child rearing in other cultures as a consequence of their exposure to the programme. Early intervention programmes are often facilitated in groups and communities in order to provide parents with the benefit of identifying and relating to each other (Bohr et al., 2010:55; Gray, 2015:308). Such interventions have been found to be overwhelmingly positive by participants across many cultures in Western and non-Western contexts (Gray,

2015:308,316). This benefit was strongly stated by all of the participants in the programme in this study. It appears that the inclusion of participants from different ethnic groups in the programme resulted in richer discussions and greater appreciation of commonalities between mothers of different cultures.

Sub-theme 5.4: Parenting styles

A few of the participants indicated how beneficial they found the section on parenting styles. After the programme, the participants said they were able to identify different parenting styles in their friends and families. The participants were also pleased to learn they can set limits in a sensitive and careful manner while still being responsive to their infant's needs. The following quotes demonstrate the positive response to learning about parenting styles in the programme:

- "Also, just learn from the other parents, in terms of discipline as well. That we should start now and how to do it, and especially that part when they said, 'I'm creating options that's in boundaries." Participant 16 (Sotho mother)

- "I like holding him and I'd say definitely there is this belief that you can spoil him if you're going to hold him the whole time." Participant 5 (White mother)

- "So with her he (husband) doesn't really allow her to take advantage as much as she used to. So if she threw a tantrum he would immediately pick her up, not anymore. After going through the manual and me explaining things to him, he now understands." Participant 1 (Indian mother)

- "I do and I know, some people you spoil the baby but you know, they're just small for so long, so I definitely would pick her up but I believe in a balance. So, they need to be picked up but they need to be taught how to be able to be on their own as well." Participant 6 (White mother)

- "I'm quite an authoritative parent; I figured that I was trying not to be. I think I said it in the session – it was a conscientious shift between authoritative and permissive. Democratic – that was the one. So, I was trying to be a conscious democrat and now I make even more of an effort to do that, and my husband is trying to be less permissive." Participant 2 (Indian mother)

The participants spoke of learning to find a balance by setting boundaries in a sensitive manner, while still creating options for their infants. Learning from other parents and being aware that sensitive care is not spoiling their babies were helpful discussions for the participants. The programme focused on the main parenting styles by means of theory,

discussions and videos, and explained how to adapt parenting in terms of facilitating a safe environment and secure attachment.

Gentle limit setting also affects a child's secure base positively, as the child learns the safe paradigms in which to explore (Holmes & Slade, 2018:17). Limit setting facilitates emotional regulation of a child and a sense of security. Early intervention programmes in Australia and England are based on the parent learning about different parenting styles, and how to set limits sensitively and consistently (Cullen et al., 2013:1038; Payne, Meddis & Mahar, 2015:58). When limits are set within the correct parenting style, the child becomes an active, involved and successful participant across a number of different contexts (Payne et al., 2015:58). The outcomes are thus based on the social and emotional development of the child, parental use of knowledge and skills, and the child learning to use appropriate behaviours to meet needs (Payne et al., 2015:58). The participants thus considered learning about parenting skills to be an important component of the programme.

8.4.6 Theme 6: Self-understanding and self-care

Self-understanding and self-care are important skills for the caregiver so as to be emotionally centred and contained in order to facilitate optimum development in her child (Horenczyk et al., 2015:339; Weinfield et al., 2008:84). In the sessions, self-understanding and self-care was discussed in terms of the influence of past attachments, self-regulation of participant emotions and co-regulation of emotion with that of their infants. The effects of adverse circumstances and modern lifestyles on the self of the participants were also highlighted under this section. It appears that the inclusion of these aspects in the programme was found to benefit participants, as will be indicated in the three sub-themes that will subsequently be discussed.

Sub-theme 6.1: Influence of past attachments

The understanding of the influence of past attachments were mentioned by the participants as powerful and thought provoking, assisting them in a deeper understanding of themselves and their own parenting behaviours. The following quotes illustrate this sub-theme:

- "If I had issues that I was dealing with from my childhood, it's something that you deal with and, also, it's good to know because sometimes when you're faced with a problem like this is not going to go away at all, you know. And it's something that I might pass on to my children. But now you could heal from it, it doesn't necessarily mean that it was something that you will pass on to your children. You know better and if you know better you can do better." Participant 9 (Xhosa mother)

- “I mean it also created an awareness for me on perhaps how other people behave could be as a result of their past ... I always kind of think everyone’s behaviour is within their control but to a certain extent there so much out of their control.” Participant 4 (White mother)

- “I’ve learned to be more patient with her so when she pushes those buttons, when I used to do the same to my mom, I remember what used to come next. Either getting a belting or a hiding and she used to get very upset with me. So that, that’s really, really helped me because ... now I don’t hit her anymore.” Participant 1 (Indian mother)

- “I think another thing that stood out for me is how our past affects how we parent. I mean that was, I’ve always sort of thought that it would but you know, just to have that confirmed.” Participant 3 (White mother)

- “You know, recently I’ve discovered that … We were sitting in a group and there was this one other lady she said her mother left her when she was 6 months. Now she’s grown but she said she doesn’t know how to attach. She’s not that attached to her mother and she thinks because she doesn’t have that when she was very young. So, I was like, I’ve learnt about attachment from here and here she says attachment. So, I’m like okay, so it’s very important for me to be with my baby. Like show them love, be there for them.” Participant 7 (Swazi mother)

- **“**I’ve also shared it with my mom and we had the discussions around how her parents parented her and what she got from there. We had a very nice discussion.” Participant 16 (Sotho mother)

- “I remember there was that portion as well, where you asked us if our parents ever allowed us to deal with fear, with happiness, or joy or whatever. I want to be able to go through all of those emotions with my child and how to deal with it because you only equip them better.” Participant 2 (Indian mother)

The participants in this study became increasingly aware of how daily family life across generations and how their family stresses may interfere with caregiving over the lives of generations in a family, by allowing the past to repeat itself. Much research has been conducted on the effects of past attachments on current parenting, and many early intervention programmes focus on understanding past attachments as a foundation from which to lead to behavioural change in current parenting practices (Lee et al., 2013:265; Velderman et al., 2006:267). Research has confirmed that there is an intergenerational cycle of insecure attachment, and certain early intervention programmes focus on breaking this cycle through attachment-based cognitive-behavioural approaches with high risk groups (Velderman et al., 2006:266). Other research has, however, found that too much of a focus on past attachments or current difficulties may increase emotional distress and the dropout

rates of participants (Wessels, 2012:93). Although awareness of the influence of historic attachment and parenting could help to prevent the perpetuation of negative practices, the presenters of parenting programmes should thus carefully assess how deep these discussions should go, based on the participants' reactions.

The next sub-theme, which is that of emotional self-regulation, helped the programme participants to learn about the importance of coping with such issues from the past consciously, and of emotional regulation while focusing on the needs of their children.

Sub-theme 6.2: Emotional self-regulation

Most of the participants in the programme discussed how much they benefitted from the section on emotional self-regulation and co-regulation with their infants. The participants voiced how it felt good to know that it was acceptable to take some time away to organise their own feelings in order to cope with their babies, and to then effectively organise their baby's feelings by accurately following their baby's cues. The participants found the different techniques for emotional self-regulation useful. These techniques gave them ideas of coping strategies and made them feel that they are not bad mothers when they are having a difficult day, or when they are triggered by their past. This sub-theme is clear in the following quotes:

- "You know, I've become more aware of the kids, I've learned to be more patient as well, you know and to be attentive. And also, sometimes at some point you're stressed out with your own things. And now with the emotional self-regulating I need to put myself behind for the child because the child needs me at that point." Participant 9 (Xhosa mother)

- "I think self-regulation was the biggest message that came up for me. Because, you know, I wasn't necessarily appreciative how important it is for me to regulate that so that she learns to regulate herself." Participant 4 (White mother)

- "I never used to be a patient person before ... Like with my husband as well, I've learned to bite my tongue, I've learned to not get so upset when I get overwhelmed and frustrated. Like when he is not around and (my infant daughter) is battling to sleep or she's not eating or she's not having, you know she's just making a fuss, I don't pull my hair out anymore. I actually sit down calmly and just wait for her to calm down and then she comes to me and then we're both fine. So, I've become much more patient with everyone, not just (my daughter) ... So, I think by not showing her that I'm getting so frustrated and calming myself down, maybe she'll learn from me and not

have that temper." Participant 1 (Indian mother)

- "It's difficult, it's really difficult but I become more conscious to try and recognise when I need to calm down. Before, I never recognised that I should. Now, I do. I recognise that it's probably not the best moment to become upset and I walk away. You calm yourself down, you do what you need to do, and then you go back so, yes, I try to regulate my emotions a little bit better or recognise it as well." Participant 2 (Indian mother)

- "The ones that helped me the most, is when you are stressed you have to go out to get some air outside and cleanse yourself. That helped me a lot." Participant 10 (Zulu mother)

- "Sometimes I know that if you are angry, maybe I fight with my husband so, I take it out on my baby. Now, I know that if you are angry you must cool down." Participant 8 (Zulu mother)

- "Yes, the talk on quality time emphasised that it's not wrong for you to have your quality time because I know sometimes if I'm like, I go and visit and my aunt, 'but where's your child – who's taking care of your child?' I'm like 'my husband is there.' It's taboo that you are leaving your child who is not even a year old for just a few hours with your husband. That it's fine just to take a break because you need that, or else you'll just panic or break down, if you don't take those breaks." Participant 18 (Luba mother)

The participants highlighted that they learned from the programme to consciously make an effort to calm themselves by means of sitting down or taking a break away from the child. The participants spoke of now recognising the importance of how their child learns to self-regulate by watching them, and how they have therefore become more self-aware. Research has found maternal depression to be linked to the mother's ability to emotionally regulate her child (Mayer & Whiting Blome, 2013:146). Thus, a number of international attachment programmes focus on the main caregiver's childhood attachment experiences and ability to resolve these and to self-regulate in relation to their current caregiving (Velderman et al., 2006:266). The programme focused on teaching the participants to learn to become more self-aware and try to resolve past issues, in order to be able to organise and focus on their baby's emotions. Mother attachment traumas are often a point of focus when dealing with mothers and infants at risk (Berlin et al., 2013:84). It is thus important to incorporate emotional self-regulation in early intervention programmes that aim to enhance mother-infant attachment.

Sub-theme 6.3: The impact of adverse conditions and lifestyle on mother-infant attachment

Some of the participants were surprised to discover that adverse psychosocial conditions can have an impact on attachment between mother and infant. Two Indian and one White participant had experienced severe traumas that affected their parenting practices, and their own ability to emotionally regulate themselves and their babies. Other participants spoke of modern life stressors that impact their bonding with their infants. Learning about the importance of resolving these matters became a real focus of interest for these mothers, as is described in the following quotes:

- "You know it's, because of our lifestyle and the workload that we have; it's really difficult for me to really sit down with her and play with her sometimes. Because I get home and then it's supper and then it's her supper and then it's bath and sleep." Participant 1 (Indian mother)
- "I think African people by our culture, it (attachment behaviours) comes naturally but it hasn't been named as such that we're doing this deliberately. It's just a thing that's happened. But I think with a busy lifestyle it can be neglected by modern day mums." Participant 16 (Sotho mother)
- "If you've got pain or if you've gone through a criminal experience, like in my case, it's difficult to find someone who is going to look at you and talk to you like they really know what you're saying. And even though you couldn't relate you made me feel comfortable. That's the difference is that most people I've come across can't do that. Compassion is a big thing." Participant 2 (Indian mother)
- "I changed. Because sometimes I don't have time. You know, sometimes when you come home from work, you have to cook, you have to bath the baby, you have to clean the house and I have a grade-2 child, and I have to do homework. I'm tired, and that stress, it goes out. I don't have that time to have the time with the kids, to bond with them but since I came here to do this programme, something changed. Not too much but a little bit. Special bonding. Normally you have bonding with kids. I only bond with them when it's the weekend and I'm not working." Participant 10 (Zulu mother)
- "... most women after giving birth, they go through depression. They don't know what to do or what is happening so, if they had this insight. I think it (insight) would help them." Participant 18 (Luba mother)

Participants mentioned how workload and general life stressors in terms of having a modern lifestyle reduced their time to attach to their babies. Daily chores focused on the physical care of their babies seemed to take precedence over taking the time to be emotionally

present and attach more deeply with their babies. With regards to adverse circumstances, certain factors such as experiencing traumatic crime and depression were raised by participants. Various research studies conducted, particularly in underdeveloped countries on the effect of attachment-based early interventions on children at risk in the first five years due to adverse psychosocial conditions has found a positive impact on maternal sensitivity and cognitive development of children (Bain, 2014:601; Cooper et al., 2014:148; Wallander et al., 2014:1251). Such interventions have also proven to have a positive effect on assisting the family in distress to address the child's needs and prevent adverse outcomes and breaks in attachment (Wallander et al., 2014:1251). Early intervention studies in South Africa, such as the one conducted in Khayelitsha, Cape Town, found that social factors such as unplanned pregnancies, unwanted infants, and lack of partner support contribute to early maternal depression, leading to infant insecurity (Tomlinson et al., 2005:1044). Research has found that many mothers who have experienced severe childhood traumas in adverse living conditions have had few positive role models, scoring lower in maternal sensitivity and responsiveness (Berlin et al., 2011:84).

Importantly, it is how caregivers cope with, deal with and react to social adversity that marks infant attachment security, more than specifically living in a poorly resourced area (Tomlinson et al., 2005:1044). Studies in Mali, Indonesia and South Africa have identified many securely attached infants in areas with high levels of social adversities and claimed that the mothers of these children were able to create a safe, nurturing environment despite adverse living conditions (Bain, 2014:599; Tomlinson et al., 2005:1044). The research findings support the notion that a mother's reactions to social adversities need therefore to be a point of focus in attachment programmes, alongside discussions on adverse conditions which may affect mother-infant attachment. In the following section, suggestions are made for the improvement of the implementation of the attachment-based programme.

8.4.7 Theme 7: Suggestions for improving the attachment-based programme

The participants suggested a few areas of improvement that they felt would enhance their experience of the programme. Medium of instruction, technology, length and inclusivity, as well as difficulty with self-disclosure were mentioned and will be discussed in the following sub-themes.

Sub-theme 7.1: Medium of instruction

A few African participants voiced the difficulty of understanding the presentation and programme manual due to language barriers. This difficulty was expressed in the following quotes:

- “Your presentation was nice. Even though, you know us, when you grow up and just learn how to write English but English is not my mother language … I’m trying to speak English properly, but I can’t. Even though somehow, I didn’t understand somewhere because of English. But you presented good.” Participant 10 (Zulu mother)
- “If you want to talk something to explain it, it will be very difficult. Yes, because we always talk Ndebele.” Participant 8 (Zulu mother)

Although the majority of the participants spoke fluent English, the two African participants in the experimental group struggled to understand some of the abstract attachment concepts that were discussed. For many of the participants in the programme, English was not their first language. Instructors who can speak the various South African languages could assist in more effectively presenting the programme, leading to participants understanding and integrating the work on a deeper level. Attachment-based programmes facilitated in South Africa often recruit local trainers from the community, offering instruction in the languages of the people in the community, which helps in understanding the people on their level, making early development programmes more effective (Aspoas & Amod, 2014:580; Cooper et al., 2014:145). Trainers are usually trained by experts within the field beforehand (Cooper et al., 2014:145). Results of interviews conducted in South African research of early intervention programmes have been found to be skewed by English as the main medium of instruction (Bain, 2014:600). Research has confirmed that programmes need to fit the resources, culture and language of the target population in order to be effective (Wessels, 2012:13). Considering the many official languages spoken in South Africa, programme effectiveness can be enhanced by incorporating the languages spoken by the majority of the people in the country.

Sub-theme 7.2: The use of technology

A few of the participants said that the videos were not clearly audible, as the presenter did not have access to the remote for the projector in the room. The researcher posted the videos on a group chat, however, not all participants had smart phones to access them. This was voiced as an area of improvement in the following quotes:

- “… you just need speakers.” Participant 3 (White English mother)
- “The manual was great. I would just maybe get an extra set of speakers if I were you.” Participant 6 (White Afrikaans mother)
- “I would have loved a projector, with a sound system so that would have been nice to watch it in that environment.” Participant 18 (Luba mother)

In the programme presented, this appeared to be the only lack of resource as the venue was large, safe and comfortable, with all other necessary resources (tables, chairs, sanitation

facilities). A projector and screen were available, but special arrangements were needed to access it. Education equipment is a necessity in early child development programmes but are presently under-resourced in South Africa (Atmore, 2013:159; Wessels, 2012:97-98). It is important that technological equipment be safe and easy to use (Atmore, 2013:159). Facilitators must be trained in the effective usage of technological equipment so as to maximise an enriched experience for all caregivers and children participating in a programme.

Early childhood development programmes (ECDs) have improved greatly since the democratic government was instituted in South Africa in 1994, with much focus on the improvement of infrastructure such as access to electricity, safety precautions, and adequate learning environments. However, a drastic limitation of resources in South Africa for these programmes still exists (Atmore, 2013:156). Rates of internet access in South Africa still remain low, with only 12.3% of the total population having desktop internet access in 2010 (Wessels, 2012:50). As experienced in this programme, this deficiency makes the dissemination of information more difficult, as participants do not always have access to the internet for research or advanced technology for communication with other participants.

There is a lack of resources for early development programmes in South Africa. Early child development centres in South Africa are lacking in the structures and processes required, as well as in adequate financial management without the necessary administrative processes and documents needed for them to run efficiently (Atmore, 2013:159; Wessels, 2012:94). There is an under-emphasis on ECD programmes in South Africa, as well as a lack of programmes which specifically meet the needs of the communities (Atmore, 2013:160). Most South Africans cannot access ECD programmes, resulting in the poorest children having a weaker foundation for their future development (Atmore, 2013:159; Cooper et al., 2014:143). Policies and resources for delivering of attachment-based programmes in impoverished and rural areas could result in reaching these people more effectively.

Sub-theme 7.3: Length of programme

One participant raised the possibility of being able to spend more time to bond with the other mothers in the programme, and getting to know them during longer group discussions that were more inclusive of all participants. This is evident in the following quote:

- “I would have loved to hear from other people as well. There were some people that I felt I would have liked to hear more, based on their description of themselves in the beginning. I feel like there should be a more deliberate effort to balance out our engagement. Yes, even more interactive would be very nice and maybe in the future we can watch the videos before we come to class. We could get them and watch and

we can discuss them in class, so we don't take that time way...." Participant 16 (Sotho mother)

Another participant wished that the programme could be based on more sessions, saying:

- "Oh a positive experience for me, I wish it was longer actually. Yah, more sessions you know ..." Participant 9 (Xhosa mother)

The duration of programmes is affected by factors such as financial and time constraints. A lack of resources for providing early intervention programmes is a reality in the South African context (Wessels, 2012: 94-97).

Early intervention programme duration in South Africa spans from short term interventions of only one session in the Baby Mat Programme (Aspoas & Amod, 2014:584), to 12 sessions in the New Beginnings psychotherapy group programme (Bain, 2014:595), to more long-term home visit programmes over a few months (Cooper et al., 2014:143). Depressed mothers have been found to attend fewer sessions over time (Bain, 2014:601). Depression can adversely affect the development of secure mother-infant attachment (as mentioned by participant 18 under adverse conditions affecting attachment). It is suggested that depressed mothers need more intensive engagement than a short-term intervention (Bain, 2014:601). Research indicates that a shorter programme length may increase accessibility to caregivers, but could lead to the omission of important content or less opportunities for discussions, role plays, and opportunity to practice new skills (Wessels, 2012:47). Therefore, there are numerous factors contributing to programme length which should be considered as important in a South African context.

Sub-theme 7.4: Socio-cultural norms related to self-disclosure

Some participants mentioned that their cultures emphasise values of privacy; therefore, self-disclosure within the context of a group discussion may be difficult for members of those cultural groups. In such cultures, there is a belief in dealing with problems and difficulties alone or within the family. One participant revealed that the fact that the other participants in the group did not know her in her everyday life made it easier for her to self-disclose to other participants attending the programme. This theme is expressed in the following quotes:

- "Yes, they would have found that quite difficult, like opening up to somebody, a stranger, talking about your personal experience. Sometimes my mother would say, go to church and you pray about it. You don't tell people about your problems and all that." Participant 18 (Luba mother)

- "What I think you'd really benefit on is what you did with us, is you got people who don't know each other from a paediatrician or whatever, and we became new moms and we didn't know each other from a bar of soap. In my opinion, I don't know if (my baby) was in nursery school and I had to go for that – I don't know if I would have opened up as much as I did not know anybody in the room. Whereas in a nursery school and if you know those moms, and some of those moms can be so judgemental …" Participant 2 (Indian mother)

As mentioned by one participant, some cultures have the norm of dealing with problems within the family. Moving outside the immediate family for child-rearing assistance could be perceived as a lack of trust in the family's ability to care for an infant. Collectivist cultures focus on finding solutions to enhance the well-being of infants between themselves (Arnett, 2016:142). Settings in which programmes are run, such as home shelters, can lead to programme presenters and participants not fully trusting each other when there are close ties between presenters and management (Bain, 2014:595). At times, caregivers themselves have been found to be suspicious of intervention programmes, fearing judgement and self-disclosure (Cullen et al., 2013:1040). Presenters must be cautious and sensitive about such fears that could limit participation in attachment-based programmes.

8.5 REFLECTION ON THE IMPLEMENTATION OF AND FINDINGS RELATED TO THE ATTACHMENT-BASED PROGRAMME

There are a number of aspects which arose in relation to the experiences of the participants. Learning across cultures was considered to be beneficial by the participants, where group discussions led to identifying, relating and learning from each other. The participants spoke of the realisation that despite culture or race, they have similar difficulties with respect to mothering. The group presentation of this programme was also considered to be highly favourable by the participants. It was also mentioned that the use of visual aids enhanced the quality of the programme, by means of the videos presented. The participants mentioned acquiring a deeper understanding of the attachment concepts after watching the videos. Thus visual presentations appeared to enhance understanding, especially for the participants where language barriers were a factor.

Although the group discussions were considered valuable by the participants, the depth of the discussions must be carefully monitored by the presenter. A few participants mentioned the programme to be quite intense to handle, therefore certain discussions in the programme on past attachments, traumas and adverse conditions must be sensitively presented with careful awareness of the participants so as to prevent over-exposure and the participants from feeling vulnerable.

Participants spoke of the benefit of telling their husbands and mothers about information received from the programme. They mentioned that this transfer of knowledge lead to further communication with their spouses and clearer decision-making on how to raise their infants.

The use of a manual was important in the programme. The participants claimed to use the manual for their own reading, and for the other caregivers of their infants (fathers and nannies).

Although the participants were all from a Western context, they did not appear to have sufficient knowledge of attachment and maternal behaviours that could support the Western context. A reflective discussion with the participants on the implementation of the programme, which could serve as a basis for conclusions and recommendations in the next chapter, is worth consideration.

Although it was not possible to confirm the effectiveness of the intervention from the measuring instrument test score results alone, the responses obtained from the semi-structured interviews were exceedingly positive with regards to the impact of the intervention. The interviews showed that the participants have a greater understanding of attachment and maternal sensitivity, by means of learning and growth as a mother in the programme.

Culture was highlighted as having an influence on attachment behaviours with regards to parenting practices and acculturation, which assisted participants in having a deeper understanding of each other.

Learning how to take care of the self and the importance of self-understanding were highlighted in the programme. The participants found the section on emotional self-regulation highly beneficial in learning how to contain their own emotions and focus on the needs of their child, as mentioned in the interviews.

Fewer sessions would be practical, as it proved difficult to persuade participants to be present for four sessions with their infants at this early stage of development. However, with the amount of information, which was found to be very extensive for some participants, fewer sessions might prove to be less effective.

Information obtained in phase 1 of the study allowed the researcher to select programme content that appeared to be relevant and acceptable to participants from different cultural backgrounds. Awareness of cultural influences on maternal attachment behaviours and parenting helped the researcher to plan reflective discussions on different topics in the programme. Certain behaviours such as play, communication, face-to-face interaction and prompt responses that are emphasised in the literature in supporting attachment appeared

not to be acceptable or acknowledged in some socio-cultural contexts. Awareness of how perceptions and practices differed from those indicated in the literature, resulted in a sensitive approach in which participants in the programme had the opportunity to reflect on their own attachment behaviours and how these correlated or contrasted with preferred behaviours.

Thus, by combining the results obtained from both the qualitative and quantitative data sets, the researcher can reach the conclusion that the intervention has had a positive effect on enhancing knowledge about maternal behaviours that could lead to secure mother-infant attachment. The interviews showed much learning and growth in general, and the measuring instrument scores showed an increase, although slight, in respect of maternal interactive style and feedback. In order to generalise such results, further research on programmes in multi-cultural settings should be implemented in South Africa, where the long-term impact on caregivers and their infant children are studied.

8.6 SUMMARY

In this chapter, the results of the pre- and post-test in measuring the effect of the attachment-based programme were presented, followed by the themes and sub-themes which arose from the semi-structured interviews in which the participants could provide feedback on the programme. Both the measuring instrument and interviews reflect positive results, with some considerations for future implementation. In the final chapter, the researcher shall provide recommendations for practice and research with regards to the implementation of an attachment-based programme and measuring instrument in the South African context.

CHAPTER 9

KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

9.1 INTRODUCTION

Attachment refers to the first emotional bond that an infant develops with a special person in her life, usually with the mother as primary caregiver (Berk, 2013:428). The first years of life is regarded as a sensitive period for the development of attachment and the quality of care during this time will determine whether a child develops a secure or insecure attachment (Berk, 2013:429; Huber et al., 2015:558). As the type of attachment has a long-term effect on the developmental outcomes of the child, it is important that parents provide sensitive and reliable care during the first two years of life (Cooper et al., 2009:1). Parental behaviours are influenced by the context factors, such as poverty, parental stress and culture (Cooper et al., 2009:1; Tomlinson, 2001:47, 49). With this study, the researcher explored the influence of culture on attachment behaviours of mothers or primary caregivers in South Africa and, based on the findings, developed and pilot tested an attachment-based parenting programme for the local context. This chapter contains a discussion of research findings. The researcher will draw conclusions based on the key findings of the study and will provide recommendations for both practice and research. The achievement of the goal and objectives for the study will first be discussed.

9.2 RESEARCH GOAL AND OBJECTIVES

The goal of the study was to develop, implement and pilot test an attachment-based parenting programme to enhance mother-infant attachment within the South African socio-cultural context. The achievement of the goal of the study is subsequently discussed in relation to each of the objectives of the study.

- **Objective 1: To contextualise attachment between mothers and their infant children**

This objective was obtained by means of a comprehensive literature study. The first step to contextualising attachment was to conduct an extensive literature study. Two theoretical frameworks, namely attachment theory and the ecological systems theory, were relevant to the study. Attachment theory provided the principles underlying attachment, whereas the ecological systems theory emphasized the importance of systems in the environment and the interaction among the various levels of systems (micro, meso, exo and macrosystems) affecting mother-infant attachment. These theories were discussed in Chapter 2, in order to understand and conceptualise attachment.

In the literature study on attachment (Chapter 3), attachment was defined, and key themes related to the topic were discussed. These themes include, amongst others, the development and types of attachment, the internal working model, infant and caregiver attachment behaviours, and the long-term effects of secure or insecure attachment on the

developmental outcomes of the child. The origins of classic attachment theory were described with its' classic focus on the traditional monolithic relationship between mother and infant. Further literature was collated to explain the more recent developments of attachment theory focusing on multiple caregiving environments, common in South Africa. Cultural norms and values, and how these affect parenting practices and attachment bonds between mother and infant, were highlighted.

As the researcher aimed to develop an attachment-based parenting programme and an observation schedule for maternal attachment behaviours, a literature review on existing attachment programmes and measuring instruments were provided in Chapter 4. It was concluded that attachment programmes and measuring instruments that were developed in Western, individualistic contexts might not be relevant to collectivist societies and to all cultural contexts.

- **Objective 2: To explore the potential influence of the South African socio-cultural context on caregiving behaviours of mothers that could influence mother-infant attachment**

The influence of the South African socio-cultural context on caregiving behaviours was explored by means of the researcher conducting semi-structured interviews with participants from the different cultures represented in the study, namely Zulu, Xhosa, Sotho, White, Indian and Coloured. Within the exploratory mixed methods design that were followed, these interviews comprised the first, qualitative component of the study. Interviews were conducted with participants in three samples, namely experts in the field of mother-infant attachment, social workers and/or psychologists, and mothers. A total of sixty-nine (69) participants across the represented cultures were interviewed to explore in-depth different caregiving behaviours of mothers within the South African context. The research findings of this phase of data collection were presented in Chapter 6 of the research report.

- **Objective 3: To develop a parenting programme to enhance maternal attachment behaviours that will support secure mother-infant attachment with consideration of the South-African socio-cultural context**

Based on the data collected in the first phase of data collection, the researcher developed an attachment-based parenting programme. The content of the programme was compiled with reflection on the themes and sub-themes that were identified during thematic analysis of the data, as well as on the literature compiled as part of the attainment of the first objective. Careful consideration was given to maternal attachment behaviours that are universally regarded as supportive of the development of secure mother-infant attachment as indicated in the literature, and its application to the South African socio-cultural context.

Aspects such as caregiver sensitivity, optimal maternal attachment behaviours, the secure base and proximity, the involvement of the extended family, culture and acculturation, modern lifestyle and adverse conditions in the environment that potentially impact on maternal attachment behaviours were included in the programme. The programme was then drawn up and programme materials were developed. These materials included a training manual prepared for each participant, appropriate educational videos, and handouts. Throughout the programme, interactive group discussions were encouraged to integrate knowledge and to assess how the above concepts fitted in with different cultures represented. The participants could also discuss their past experiences in light of their cultural values affecting their current parenting behaviours. The development of the programme was described in Chapter 7.

- **Objective 4: To develop an observation scale for maternal attachment behaviour for utilisation within the South African socio-cultural context**

The researcher developed an observation scale as measuring instrument for maternal attachment behaviours. The development of the observation scale was guided by literature on current measuring instruments available in the public domain. The content of the scale was based on three main constructs, namely maternal sensitivity, maternal interactive style and maternal feedback. The indicators within each of these constructs were determined by the content of the parenting programme and thus focused on the maternal attachment behaviours that were discussed during the presentation of the programme. The observation scale was therefore deemed relevant for pilot-testing the programme, as well as relevant to the local socio-cultural context. Indicators and procedures that were described in the literature as less relevant to collectivist cultures, such as stranger anxiety, were not included in the observation scale. More recent research developments on the effects of culture on parenting practices and attachment were thus considered. The development of the measuring instrument was described in Chapter 7.

- **Objective 5: To pilot test the parenting programme for mother-infant attachment**

The pilot-testing of the programme was conducted with a sample of 18 mothers who were recruited at a medical clinic. Programme participants were selected with the assistance of the Paediatricians at the clinic. The sample of mothers was divided into an experimental and a comparison group. A pre-test and post-test were conducted by observation of maternal attachment behaviours during an eight-minute mother-infant play session. The sessions were video-recorded and maternal attachment behaviours were scored by means of the developed observation scale. The pre-test was conducted with both the experimental and the comparison groups within the same time frame. The participants in the experimental group attended the developed programme, after which a post-test was conducted with both the experimental and comparison group; again, through the video-recorded mother-

infant play sessions. The mothers in the comparison group attended the programme after the post-test. The quantitative data analysis showed that there was not a statistically significant change in the measured maternal behaviours from the pre-test to the post-test for the experimental group. Furthermore, comparison of the pre-test and post-test results between the experimental and comparison group did not indicate statistically significant results. The researcher's own experience of the strengths and limitations of the programme were noted and documented, in order to consider changes in the content and presentation of the programme. The quantitative data were presented in Chapter 8.

- **Objective 6: To explore the experiences of the mother participants of the developed parenting programme**

The experience of the participants of the developed parenting programme was explored by means of in-depth semi structured interviews which were conducted after the programme. These interviews explored the participants' experiences and thoughts with regards to the content and presentation of the programme, as well as their suggestions in terms of the programme in general. The interviews were then thematically analysed into themes and sub-themes. Despite the quantitative data showing limited change in maternal attachment behaviours before and after attending the programme, the qualitative data provided positive information on how the participants experienced the programme. The themes on the importance of attachment and a lack of knowledge on optimal maternal attachment behaviours, were similar to the themes that were obtained in the first phase of data collection. The research findings related to this objective are described in Chapter 8.

- **Objective 7: To make recommendations in terms of culturally sensitive attachment-based parenting programmes in the South African context**

Objective 7 is addressed in the next section of this chapter by means of the presentation of conclusions and recommendations.

9.3 KEY FINDINGS AND CONCLUSIONS

The key findings and conclusions are discussed with reference to the theoretical framework for the study, the literature review and the empirical findings of the study.

9.3.1 The theoretical framework of the study

In this study attachment theory and the ecological systems theory are applicable as theoretical frameworks, as the research focused on the early development of the infant in the context of the infant's relationship with attachment figures in the environment.

Attachment theory is based on the understanding that early attachment relationships are internalised and have a strong impact on other important relationships later on in life. Based

on ethological theory, classic attachment theory perceives infants as biologically predisposed to seek proximity to the main caregiver through built-in behavioural signals, such as crying, babbling and grasping, aimed at survival. As a result of early caregiving experiences, infants develop either a secure or insecure attachment as well as an internalised representation (the internal working model) of the self, others and the world that will affect all future relationships. Sensitive caregiving leads to secure attachment that supports an internal representation of the self as worthy and lovable, others as reliable, and the world as a safe place. Recent studies on attachment indicate that early attachment experiences also shape the developing brain. The ethological principle of a critical period views the first two years of life is a sensitive period for the optimal development of attachment. Caregiving experiences during this period is critical for the development of attachment, whether secure or insecure.

Attachment theory has been applied as a model for normal and abnormal development of the child. Critics of classic attachment theory, however, challenge the narrow focus on the mother-infant dyad, and the lack of focus on the diversity of child-rearing practices. Recent studies on attachment focus on the child in multiple caregiving arrangements as well as on the socio- economic and cultural contexts in which the child is raised that affects maternal behaviours and thus the development of attachment.

The ecological systems theory of Urie Bronfenbrenner explains child development as occurring within the wider social environment. According to this theory, children are developing within a complex system of relationships that are multi-layered and inter-connected, namely the micro, meso, exo, macro and chronosystems. The microsystem refers to the child's immediate environment, including the immediate family and other systems with which the child has direct contact such as the school, neighbourhood or day-care centre. The child's development is also affected by the link between the different microsystems (i.e. the mesosystem), by other settings that indirectly affects the child's experience such as the parent's work or services in the community (i.e. the exosystem) and the wider systems of cultural values and norms, laws and resources (i.e. the macrosystem). The environment is not static but is constantly changing over time; a concept that is represented as the chronosystem.

The ecological systems theory gives recognition to child development not only being affected by the immediate environment and personal characteristics of the child, but also by child's wider environment. The relevance of the ecological systems theory to this study is observed in, amongst others, the effects of culture (the macrosystem), acculturation (the chronosystem) and involvement of the extended family in caregiving (the exosystem) on maternal attachment behaviours and mother-infant attachment (the microsystem).

It can be concluded that, whereas attachment theory provided the theoretical underpinnings for understanding attachment as a dynamic process, the ecological systems theory indicated the influence that the socio-cultural context could have on maternal

attachment behaviours. The two theories provide an understanding of the nature-nurture interaction involved in children's development, as well as changes that occur over time.

9.3.2 The conceptualisation of attachment

Attachment is seen as an innate, instinctual drive whereby an infant strives to be physically close to the mother or primary caregiver, thereby maximising her survival. It is important for the mother to closely follow infant cues so as to appropriately fulfil the emotional and physical needs of the infant, and serve as a secure base for the infant. The interaction between mother and infant leads to the formation of attachment, which is defined as the emotional bond between the primary caregiver, usually the mother, and the infant child. Maternal responses to the child's cues are especially important during infancy, which is a sensitive period for the development of attachment. Based on maternal or caregiver responses to infant cues, the infant develops either secure attachment or insecure attachment patterns. Recent research indicates that secure-mother infant attachment has a positive influence on brain development, internal representations of the self and others (the internal working model), and socio-emotional and cognitive developmental outcomes.

The attachment behaviours of the mother as the secure base for the infant, plays a significant role in the attachment relationship. The mother serves as a safe haven, from which the infant can explore the environment and return too for comfort. One of the first markers of a clear-cut attachment to the mother or main attachment figure, is the occurrence of separation anxiety that develops around nine months of age. However, as the child grows older, attachments are also formed with secondary attachment figures such as fathers, siblings or grandparents.

Research emphasises the importance of specific maternal behaviours that support secure mother-infant attachment. These behaviours relate, amongst others, to touch, eye contact and gazing, smiling, positive face-to-face interaction and communication, feeding and holding and are seen as characteristic of sensitive care. Maternal sensitivity is understood as a sensitive, prompt and appropriate response to the needs of the infant based on an accurate understanding of the infant, and being attuned with the infant, which is understood as the co-regulation of affect through a sensitive, rhythmic interaction between the attachment figure and infant.

Research indicates that the social context in which the caregiver and child live, affect caregiver behaviours. Adverse social conditions, such as poverty, unemployment and marital problems have been found to negatively affect the physical and emotional availability of the caregiver; thus, showing the relevance of the ecological systems theory. Although ethological and attachment theory emphasise attachment as innate to humans, consideration of the wider societal context and transgenerational transmission of attachment styles could explain the variance in attachment behaviours in different contexts.

Significant to this study, is that culture has an impact on parenting practices, values and norms which affects parenting practices and mother-infant attachment behaviours. Culture is also linked to the inter-generational transmission of attachment, as parents pass on learned parenting behaviours to their offspring. However, as reflected by the chronosystem in the ecological systems theory, culture is not static, and acculturation can occur over time whereby cultural traditions and practices are diffused. Research studies have found substantial differences in parenting practices between Western, individualistic cultures and collectivist cultures that focus more on relational interdependence and social harmony. African culture is seen as a collectivist culture.

It can be concluded that an understanding of attachment and of maternal behaviours that have been found to support secure attachment are important for all mothers and caregivers of infant children. Given the link between attachment, neurobiological development and long-term developmental outcomes, the importance of attachment and appropriate maternal attachment behaviours cannot be under-estimated, regardless of socio-economic and socio-cultural contexts. The internal working model formed during infancy and childhood tends to persist into adulthood and affect parenting of the next generation.

However, research-based evidence that the social context affects caregiver behaviours cannot be ignored. Numerous research studies in different parts of the world, provide evidence that culture (the focus of this study) affects caregiving practices, the socialisation of children and attachment security; with marked differences between Western individualistic cultures and collectivist cultures that are more prevalent in the developing world. If cultural practices that do not support secure attachments are overlooked by professionals, infants can be deprived of opportunities for optimal development. However, if cultural sensitivity is lacking and cultural practices are misunderstood by professionals, parenting practices could easily be pathologised.

9.3.3 Attachment programmes and measurements of attachment

Attachment-based parenting programmes facilitating attachment security have been widely facilitated over the past twenty years. A literature overview shows that most of these programmes have been developed in Western contexts but are not as common in the developing countries. Early childhood interventions in Western countries focus on preventative approaches where parents are taught skills and are provided with knowledge in order to enhance their child's development, while offering formal and informal support to parents.

Methods of instruction of Western attachment-based programmes involve verbal instruction, video feedback, home visitation, the use of training manuals; all of these that are implemented with the aim of assisting mothers to support attachment security for her child. Other methods of instruction involve supportive counselling, identifying community support, problem solving, play, monitoring mood and anxiety and psycho-education

methods in terms of developing the parent's knowledge and skills in infant development. Reflective functioning and using a qualitative narrative approach are also methods of instruction applied in the West, where parents are asked to reflect on their parental behaviour and reflect on questionnaires they answer. This approach assists in the emotional regulation of parents when engaging with their children.

The general focus of Western attachment-based programmes is to heighten maternal sensitivity and increase parental coherence, predictability and warmth to enhance the attachment between the mother/caregiver and infant and also to prevent maltreatment in high risk groups. These attachment-based programmes also focus on the past attachments of parents, and teaching the effect of the past on current parenting practices and behaviours. Attachment-based community intervention programmes also exist, where caregivers in the community are enabled to engage more sensitively with their children.

In the Western context, there are a number of measures of attachment which are normally applied in a laboratory or clinical setting, including The Strange Situation Procedure (SSP), The Adult Attachment Interview (AAI), The Transition to Adulthood Attachment Interview (TAAI), The Marshak Interaction Method (MIM), The Infant-CARE Index, The Attachment Q Sort Test (AQS) and The Still Face Procedure (SFP).

Indicators of attachment relevant to the above programmes and measurements of mother-infant attachment include maternal behaviours and infant behaviours, usually observed in play interactions between mother and infant. Maternal behaviours included as indicators are maternal sensitivity, responsiveness, interaction and engagement, as well as communication and attention flexibility, anxiety and avoidance. Maternal behaviours are further rated according to the mother's ability to allow the child to explore the environment and the mother's reactions to her child when returning. Infant behaviours included as indicators are the infant's interaction and engagement with the mother, the infant's reactions when the mother separates and returns, the infant's interaction and communication with mother and the infant's ability to give attention to mother.

Critics of the above programmes and measurements of attachment point out that the indicators of secure and insecure attachment used in the Western context might not be relevant to non-Western contexts and could affect the interpretation of mother-infant attachment behaviours in the latter contexts. Research has found that social and cultural norms and practices related to emotional expressiveness, independence of infants, maternal responses to infant signals, multiple caregiving and mother-infant sleeping arrangements could strongly impact on the attachment behaviours of both mothers and infants.

Although much could be learned from the attachment programmes and measuring instruments that were developed in Western contexts, researchers advise that emphasis should be placed on indicators of maternal attachment behaviours based on consideration

of variation in socio-cultural contexts. It can be concluded that attachment programmes and measuring instruments that are developed with cognisance of the multi-cultural South African context, would support more appropriate programme content and interpretation of maternal caregiver behaviours in the measurement of attachment.

9.3.4 Empirical findings

Qualitative data were collected from mothers and professionals (social workers and/or psychologists) from different cultural groups, as well as from experts on mother-infant attachment on their views of the influence of culture on attachment. The information was used to develop the attachment-based programme in the study. Subsequently, qualitative data were collected to explore the experiences of participants who attended the programme and quantitative data was collected to determine the influence of the programme on maternal attachment behaviour. Key findings in the qualitative data collection are highlighted.

9.3.4.1 Attachment is an innate quality and sensitive care valued across cultures

The intrinsic nature of attachment was expressed by most of the participants in both phases of data collection. Participants across all represented cultures in the study spoke of a natural tendency to attach to their children and of sensitive care being valued across cultures. It was stated that socio-economic and psychological factors in the micro, meso and exosystem play a role in maternal sensitivity, but that attachment is largely an instinctual driving force between mother and infant. Valuing the innate nature of attachment and of sensitive care could be used as a strength for engaging mothers in attachment programmes.

9.3.4.2 The influence of culture and acculturation

Participants in phase 1 and phase 2 of data collection, whether mothers, professionals or experts, were mostly of the opinion that culture plays a significant role in parenting practices and maternal behaviours. The participants indicated that they would raise their infants within their original cultures, if unmarried. In general, they were more influenced by the cultural practices of their family of origin, indicating their awareness of their historical attachments and how it influenced their parenting. Some participants expressed the view that it was sometimes difficult to distinguish between the influence of culture and that of societal norms, and which was more dominant when raising their children.

The participants in both phase 1 and phase 2 of the study spoke of acculturation playing a role in diffusing the influence of traditional cultural norms on their parenting practices. Some indicated it was due to losing contact with their traditional cultural groups, whereas others indicated that it was due to being exposed to Western thinking on attachment and raising children. Participants mentioned that cultural norms and practices were however still highly relevant for their families in the rural areas. Professionals can therefore not adopt a uniform approach when working with mothers from different cultures. Factors such as

geographic location and acculturation could lead to variations in cultural practices, even within cultural and family groups.

9.3.4.3 Knowledge of attachment

Despite the view that attachment was an innate quality, participants in all three samples in the first phase of the study (mothers and professionals from different cultural groups, and experts on mother-infant attachment) raised the view that there was a general lack of knowledge on attachment, the importance of attachment and maternal behaviours that promoted sensitive caregiving. This theme was reflected by the participants in the second phase of the study, who appreciated the awareness and understanding gained by their attendance of the attachment-based parenting programme. It should be noted that the latter participants were from a middle-class background who were more likely to obtain knowledge on attachment through the media or social platforms. It can be concluded that attachment programmes could make a contribution to secure mother-infant attachment and infant well-being in all socio-economic and socio-cultural contexts.

9.3.4.4 Primary and secondary attachment figures

Almost all of the participants in phase 1 and 2 of the study referred to the mother as the primary attachment figure, indicating the importance of mothers in the care of their infants. Some participants spoke of the grandmother at times serving as the primary caregiver and attachment figure. The involvement of the grandmother as mentor for mothers was particularly apparent amongst participants from the Black and Indian cultures where it was mostly the role of the maternal grandmother to teach the mother how to attach to her infant. The mother was, however, still viewed as most important in the infant's life. However, participants indicated that role of the father appeared to change, from mostly being expected to function as a provider and protector of the family to be more nurturing and involved in the day-to-day care of their babies due to modernisation and acculturation.

Most of the Black, Indian and Coloured participants in both phases of the study regarded the role of the extended family as very important. Apart from grandmothers and aunts, in traditional African Black cultures the role of siblings, sometimes as young as 10 years, is considered to be an integral source of support to the mother or primary caregiver. White participants relied more on their immediate nuclear family for support in raising their children. This fact brought to question the relevance of Western-based attachment programmes and measurement instruments in non-Western multi-cultural contexts, where certain indicators such as stranger anxiety are not as apparent for children raised in multiple caregiving societies.

9.3.4.5 The concept of sensitive care

Most of the participants in both phases of the study and across all represented cultures considered the sensitive care of infants as important. Responding to infant cues was valued

by the participants. However, too much attention was perceived as a form of spoiling the baby and was a general view among the participants across cultures and in both phases of the study. As sensitive and responsive care leads to healthy brain development, reducing a sensitive response to an infant's cries may have negative consequences in terms of infant development and the development of a secure mother-infant attachment. After attending the developed attachment-based programme, participants in the second phase of the study expressed the value of learning about the mother's role as a secure base for her infant. It therefore appears that, although mothers valued the importance of sensitive care, the practical implementation thereof in terms of attachment theory is not always understood. All mothers may therefore benefit to learn about the concepts of sensitive care and the mother's role as a secure base for the infant.

The participants in phase 1, however, highlighted that the physical needs of the infant were prioritised over the emotional needs, as taking care of the infant's physical needs were perceived as taking good care of a baby. In addition, the participants expressed concerns over the negative effects that living in under-resourced communities had on the mother's ability to provide sensitive care, as will be discussed in a further theme.

9.3.4.6 Parenting practices that might affect attachment

Many of the caregiving practices mentioned by the participants in the first phase of the study were relevant to the concept of sensitive care as described in attachment theory and the literature on attachment. Most of the participants in the African, Indian and Coloured cultures viewed breastfeeding and carrying their babies on their back as important bonding practices between mother and infant, most particularly in rural areas. Similarly, most of these participants voiced the importance of co-sleeping as a form of bonding with their babies. For some of the Black participants living in rural areas, socio-economic constraints were also a reason for a baby sleeping in the same bed. A separate room, bed or cot/pram was not a conceivable and realistic option for them based on the socio-economic difficulties with which they struggled. Breastfeeding, co-sleeping and carrying the baby on the back was found to be positive parenting practices making a sensitive, responsive parenting style more practical. These aspects were considered in the development of the parenting programme, and supportive views towards them were voiced by the participants in the second phase of the study.

Some parenting practices and beliefs that were described by the participants in the first phase of the study were, however, not in support of the practice of sensitive care as described in the literature on attachment. In terms of independence of the infant, it appeared that Black participants had a higher regard for early independence; a practice that was viewed as a point of concern by one of the expert participants. In contrast, participants from Indian and White cultures seemed to regard the nurturing of dependence in the early stages of development as more important. Both of these views could affect the dynamics of proximity and exploration that is regarded as important in the secure base concept in

attachment theory, and seen as important for the development of either secure or insecure attachment.

Certain parenting behaviours that are seen to enhance the development of a secure attachment, were not valued by many of the participants in the first phase of the study. While practiced by some participants, a number of participants, especially from the Black and Coloured ethnic groups, mentioned that mother-infant play and face-to-face interaction is not always practiced, as a consequence of the perceptions of the appropriateness of the behaviour, a lack of time and work responsibilities. Practical responsibilities were voiced as taking precedence, which was considered a negative factor in terms of enhancing a secure mother-infant bond. Programme participants from phase 2 also mentioned adverse circumstances such as work and modern lifestyles coming in the way of attaching with their infants. The literature on attachment highlights the importance of behaviours such as gazing, face-to-face interaction, joyful play and quality time with the infant as important practices that support the development of secure attachment.

Views on discipline were also found to be a parenting practice having an impact on maternal attachment behaviours that could affect secure mother-infant attachment. Some of the African participants in the first phase of the study discussed how being strict and firm with their babies are considered to be good parenting and necessary for children. The importance of there being a divide between parent and child was voiced as a form of maintaining respect. Neglect was mentioned as a problem, in that mothers in the rural areas often leave their babies alone when errands need to be run and when there is no-one taking care of the baby.

In the literature on attachment and child development, certain maternal behaviours are required for the development of secure mother-infant attachment. These behaviours can be divided into the categories of maternal sensitivity, maternal interactive style, and maternal feedback and are important for all children, regardless of their socio-cultural or socio-economic contexts. An attachment-based parenting programme should therefore include information that could teach mothers about positive maternal attachment behaviours. As such information might challenge the preconceived ideas of mothers from different cultures, the programme should be presented with sensitivity to cultural diversity.

9.3.4.7 The influence of socio-economic circumstances

Some of the participants in phase 1 of the study spoke of poverty or adverse conditions having an impact on their bonding with their children. With reference to socio-economic and political contextual issues in Southern Africa, participants spoke of the impact that adverse environmental conditions could have on mother's ability for sensitive care. Participants who worked in the field of child and family care mentioned the challenges related to single parenthood and teenage pregnancy.

Participants in phase 1 and phase 2 of the study mentioned the impact that modern lifestyle and overwhelming responsibilities could have on attachment. Many participants spoke of having little time and energy to bond with their infants due to work constraints and life stressors. Working mothers had to leave their infants in day-care or with other caregivers which minimised the time for face-to-face mother-infant interaction.

It is important to bear in mind that numerous contextual factors, besides culture, can have an influence on maternal attachment behaviours. The ecological systems theory provides insight into the influence of the environment on the development of children and, in the context of this study, the development of mother-infant attachment. South Africa is a developing country with many socio-economic challenges. As adverse conditions negatively affect maternal attachment behaviours, professionals such as social workers need to take a holistic approach when working with mother-infant attachment.

9.3.4.8 The implementation of an attachment-based parenting programme

Based on intervention research, an attachment-based parenting programme was developed and pilot-tested for the purpose of this study. The quantitative data obtained showed that the attendance of the programme did not lead to statistically significant change when comparing the pre-test and post-test data of the participants in the experimental group. The researcher could, however, gain valuable insights based on the qualitative data on the participants' experiences of the attachment-based parenting programme.

As indicated in the discussion thus far, the participants in the second phase of data collection had similar views to those in phase 1 of the study on a number of aspects. Although the participants viewed attachment as innate and sensitive care as a natural tendency in mothers, they were of the opinion that they did not have sufficient knowledge of attachment and of maternal attachment behaviours, as a phenomenon. They expressed a heightened awareness of behaviours underlying sensitive care (as a result of attending the programme, such as the mother as the secure base and mother-infant communication and play.

A significant theme related to their learning and growth as a mother and being a 'good enough' mother, thereby challenging perceptions and resulting guilt feelings related to not being a 'perfect' mother. A point that could be emphasised in the context of this study, was the value participants assigned to attending the programme with a group of mothers from different cultures. Participants gained an understanding of common challenges faced by all mothers, despite culture.

Another prominent theme related to the value of knowledge that supports self-understanding and self-care. Participants could relate to the influence of past attachments, the need for maternal emotional self-regulation, and the effects of adverse conditions and modern lifestyle on maternal attachment behaviours. With South Africa being a developing

country with numerous socio-economic challenges that could influence mother's capacity for sensitive infant care, education on the importance of self-care and ways to achieve it, can build strengths and empower mothers in their role as caregivers.

Participants suggested that aspects such as medium of instruction, the use of technology, the length of the programme and socio-cultural norms related to self-disclosure should be considered in the presentation of programmes to mothers.

It can be concluded that an attachment-based parenting programme presented to mothers in a group can be regarded as an effective way of educating mothers on mother-infant attachment and maternal attachment behaviours that support the development of secure attachment. The group format, involving interactive discussions and sharing of information, can lead to a broader focus of learning apart from the education on attachment. Mothers can become aware of shared joys, concerns and challenges and develop greater cultural sensitivity and sensitivity to mothers living in different socio-economic conditions.

9.3.4.9 Influence of the attachment-based programme

The quantitative results on the influence of the attachment-based parenting programme did not yield any information in terms of a statistically significant change in the measured maternal behaviours from the pre-test to the post-test for the experimental group, or for the pre-test and post-test results between the experimental and comparison group. It is concluded that further research needs to be conducted for the evaluation of the developed programme.

9.4 RECOMMENDATIONS

Based on the key findings and conclusions, recommendations for practice and research are presented in this section. Although the recommendations will mainly focus on social workers, based on the study being in the field of social work, many of them can also apply to other mental health and healthcare professionals.

9.4.1 Recommendations for practice

Given the primary role of secure or insecure attachment in infant well-being and development throughout life, awareness and education on attachment should be a primary intervention in all of society.

- As a first step, professional education in social work should include modules on attachment to provide social workers with comprehensive education on the theory and practices underlying attachment. Social workers who work from a developmental social work approach can utilise this knowledge for working on a preventative level of service delivery by empowering mothers and caregivers with knowledge and skills for enhancing secure mother-infant attachment.

- Research on attachment has led to the identification of certain maternal behaviours that support secure mother-infant attachment. Given that these behaviours are strongly linked to neurobiological development and developmental outcomes, understanding of infant attachment signals and appropriate maternal or caregiver responses should form the basis of attachment-based education and/or programmes, regardless of socio-economic or socio-cultural context. Local practices such as multiple caregiving, co-sleeping, the role of grandmothers and involvement of the extended family, should however be taken into account. Furthermore, information should be presented with sensitivity to and respect for the cultural diversity and the socio-economic challenges in South Africa.

- Social workers can raise awareness and provide education on attachment in individual work with service recipients, in group work (as in this study) or in community work, for example with awareness campaigns at clinics and churches. With a high incidence of teenage pregnancy in South Africa, schools can also serve as platforms for raising awareness of mother/caregiver-infant attachment as part of life skills education.

- As the sensitive period for the development of attachment is the first two years of life, social workers should target interventions at expectant mothers. Awareness programmes can be presented at antenatal clinics in public and private healthcare settings.

- Social workers must focus on presenting attachment-based programmes in under-resourced communities to support caregivers struggling with social adversities such as modern lifestyles, maternal depression, poverty and acculturation which may affect maternal sensitivity. More attachment-based programmes should be implemented in South Africa making more caregivers aware of the importance of sensitive, responsive caregiving on the early brain development and future development of the infant and child. Multiple caregiving arrangements must be recognised as important support structures in the South African context with a focus on the important role of the grandmother and siblings.

- Interventions must be implemented with consideration of factors in different ecological contexts, especially in under-resourced communities, such as access to venues, the use of technology, the duration and time of programmes, as these factors could affect attendance by service users. Social networks can provide a valuable means of sharing information, however, many service users may not have the means to utilise these as resources.

- In the South-African multi-cultural context, social workers can consider an additional advantage of presenting attachment programmes in a group format for mothers or caregivers from different socio-cultural backgrounds. Group discussions could have the

advantage of enhancing understanding and cultural sensitivity among mothers and caregivers from different socio-cultural backgrounds.

- Social workers must also keep in mind the language of instruction when presenting attachment programmes as English is a second language for many South African groups. Efforts should be made to involve co-workers who are fluent in the languages of the represented groups, to ensure information is well understood.

9.4.2 Recommendations for future research

Mother-infant attachment has been the topic of extensive research worldwide. The review of the literature for this study, however, pointed to limited research conducted on mother-infant attachment in the South African context. The following recommendations can be considered for future research by students or practitioners in social work and other mental health professions:

- Based on the findings of this study, the researcher firstly recommends a larger scale study to evaluate the effectiveness of the developed attachment-based parenting programme as a next phase in the process of intervention research. Data collected from a larger sample could provide insights relevant to the refinement of the programme.

- Attachment-based programmes and measuring instruments should be carefully tailored to non-Western societies. Therefore, further research is suggested in terms of measuring attachment in collectivist cultures in the South African context.

- The present study can be replicated in rural areas where adherence to culture is expected to be more prevalent and less affected by the process of acculturation. Qualitative studies that focus more in-depth on specific racial/cultural groups could provide valuable information on mother-attachment in different socio-cultural contexts.

- Research can be conducted within multiple caregiving arrangements. Such studies can explore the effect on attachment in situations where multiple attachment figures play a primary role in the life of an infant.

- Further research should be conducted on how knowledge on attachment can be transferred in a culturally sensitive manner in situations where diverse cultures are prevalent.

In conclusion, the researcher will indicate the accomplishment of the goal and objectives of the study. Afterwards, answering of the research questions will be discussed.

9.5 ACCOMPLISHMENT OF THE GOAL AND OBJECTIVES OF THE STUDY

The goal of this study was to develop, implement and evaluate a parenting programme and measuring instrument to enhance mother-infant attachment and be utilised in the South

African socio-cultural context. The researcher was able to achieve this goal by the accomplishment of the objectives, briefly elaborated below in table 9.1.

Table 9.1 Accomplishment of the study objectives

No	Objective	Achievement
1	To contextualise attachment between mothers and their infant children.	The objective was achieved in the literature review presented in Chapters 2, 3 and 4.
2	To explore the potential influence of the South African socio-cultural context on caregiving behaviours of mothers that could influence mother-infant attachment.	This objective was accomplished by means of the research findings presented in Chapter 6 and in Chapter 8. Key findings and conclusions were presented in Chapter 9.
3	To develop a parenting programme to enhance maternal attachment behaviours that will support secure mother-infant attachment with consideration of the South-African socio-cultural context.	This objective was achieved in Chapter 7, in which the mother-infant attachment programme was presented.
4	To develop an observation scale for maternal attachment behaviour for utilisation within the South African socio-cultural context.	This objective was achieved in Chapter 7, in which the developed measuring instrument was presented.
5	To pilot test the parenting programme for mother-infant attachment.	This objective was accomplished by the presentation of the quantitative and qualitative findings in Chapter 8.
6	To explore the experiences of the mother participants of the developed parenting programme	This objective was accomplished by means of the presentation of qualitative findings of the semi-structured interviews with the participants in the programme, in Chapter 8.
7	To make recommendations in terms of culturally sensitive attachment-based parenting programmes to enhance mother-infant attachment in the South African context.	This objective was achieved by means of a summary of findings, conclusions and recommendations presented in the final chapter of this study.

The above goal and objectives provided the framework for the main research questions.

9.6 ANSWERING THE RESEARCH QUESTIONS

The following research questions guided the study:

- What is the influence of the South African socio-cultural context on maternal caregiving that will support mother-infant attachment?
- What elements should be included in a parenting programme to enhance maternal attachment behaviours within a diverse socio-cultural context?
- What is the influence of socio-cultural factors on the measurement of attachment?

As is evident in this study, the South African socio-cultural context has both positive and negative effects on maternal caregiving. Participants from the represented South African cultures voiced the importance of skin-on-skin contact by means of practices such as breastfeeding, carrying and co-sleeping. Through the study, various cultural norms and values became apparent such as the value of multiple caregiving arrangements and the important role of siblings and grandmothers in raising a child. Other cultural norms which may involve an inappropriate expectation of independent behaviours of the child and a belief in too much attention leading to the spoiling of a child, may have a negative effect on mother-infant attachment.

The South African socio-economic context poses some serious adversities such as: poverty, unemployment, violence and HIV/Aids, which impact maternal sensitivity and cannot be disregarded when researching mother-infant attachment.

Therefore, this study highlighted the importance of certain elements to be included in an attachment-based parenting programme which enhances mother-infant attachments within a diverse socio-cultural context. Elements such as understanding attachment and attachment behaviours; the importance of sensitive caregiving on brain development and developmental outcomes of infants; multiple caregiving and the role of the grandmother, siblings and extended family; and coping with social adversities in the environment which may obstruct attachment and affect emotional self-regulation and co-regulation with the infant.

The study demonstrated the importance of applying a sensitive variance with regards to socio-cultural factors when measuring maternal attachment behaviours with regards to communication and levels of interaction. Some participants valued communication with their infants while others viewed this aspect as less important. There were cultural differences in terms of levels of independence expected of the infant as some participants engaged in more interactive play, whilst others allowed their infant to play and master skills alone for longer periods. The quality of certain maternal behaviours such as the degree and quality of facial expressions, voice tone, eye contact and smiling appeared to differ across cultures. Touch also appeared to be significant as some participants touched, held and

played with their child and others engaged in less physical contact and less play. Despite these differences, universal patterns of attachment were evident in that all participants showed the need to love and connect with their infants. This need was however expressed differently across the represented cultures.

The researcher can conclude that socio-cultural factors must be considered when selecting indicators for a measurement instrument but that certain universal indicators can be included and are also appropriate in a South African context.

9.7 CONCLUDING REMARKS

Attachment is an innate human drive, aimed at survival, where infants seek proximity to the mother or caregiver. The response of the mother, thus maternal attachment behaviour, is critical in the development of secure and insecure attachment. Based on the substantial and long-term effects related to security of attachment, it can be concluded that early interventions to promote mother-infant attachment play a significant role on a primary prevention level to promote the well-being of children and society, regardless of socio-cultural or socio-economic contexts.

REFERENCES

Adonis, C. K. 2016. Exploring the salience of intergenerational trauma among children and grandchildren of victims of apartheid era gross human rights violations. *Indo-Pacific Journal of Phenomenology,* 16(1-2):1-17.

Ainsworth, M. 1969. Object relations, dependency, and attachment: a theoretical review of the infant-mother relationship. *Child Development,* 40(4):969-1025.

Algood, C. L., Harris, C. & Sung Hong, J. 2013. Parenting success and challenges for families of children with disabilities: an ecological systems analysis. *Journal of Human Behaviour in the Social Environment,* 23(2):126-136.

Alink, L.R.A., Van Zeijl. J., Mesman. J., Van Ijzendoorn. M., Bakermans-Kranenburg, F.J., Stolk, M.N., Koot, H.M. 2006. Attachment-based intervention for enhancing sensitive discipline in mothers of 1-3 year old children at risk for externalizing behaviour problems: a randomized controlled trial. *Journal of Consulting and Clinical Psychology,* 74(6):994-1005.

Amoateng, A. Y. & Kalule-Sabiti, I. 2013. Social structure and sexual behaviour of black african adolescents in the northern province, South Africa. *South African Review of Sociology,* 44(1):131-157.

Arnett, J. J. 2016. *Human Development.* 2nd ed. Boston: Pearson.

Ashton, S. 2014. Researcher or nurse? Difficulties of undertaking semi-structured interviews on sensitive topics. *Nurse Researcher,* 22(1):27-31.

Aspoas, B. & Amod, Z. 2014. A South African study on care-giver perceptions of a parent-infant intervention implemented to foster secure attachment. *Infant Mental Health,* 35(6):580-590.

Atmore, E. 2013. Early child development in South Africa: progress since the end of Apartheid. *International Journal of Early Years Education,* 21(2-3):152-162.

Babbie, E. 2013. *The Practice of Social Research.* 13th ed. London: Wadsworth Cengage Learning.

Bain, K. 2014. New beginnings in South African shelters for the homeless: piloting of a group psychotherapy intervention for high-risk mother-infant dyads. *Infant Mental Health Journal,* 36(6):591-603.

Baker, J. 2014. *Parent education programmes for early childhood development: reflections of practitioners.* Cape Town: Stellenbosch University. (MSW Mini-Dissertation).

Barry, R. A. & Lawrence, E. 2013. Don't stand so close to me: an attachment perspective of disengagement and avoidance in marriage. *Journal of Family Psychology.* 27(3):484-494.

Bartlett, L. & Vavrus, F. 2017. Comparative case studies. *Educação & Realidade,* 42(3):899-918.

Baxter, J., Weston, R. & Qu, L. 2011. Family structure, co-parental relationship quality, post separation paternal involvement and children's emotional well-being. *Journal of Family Studies,* 17(2):86-109.

Becvar, D. S. & Becvar, R. J. 1996. *Family Therapy.* Boston: Allyn and Bacon.

Bell, M. & Wilson, K. 2003. *The practitioner's guide to working with families.* New York: Palgrave Macmillan.

Belsky, J. & Fearon, R. P. 2008. Precursor of attachment security. In Cassidy, J. &. Shaver, P.R. (Eds.) *Handbook of Attachment.* New York: The Guilford Press.

Berk, L. E. 2013. *Child Development.* New Jersey: Pearson Education.

Berlin, L. J., Appelyard, K. & Dodge, K. 2011. Intergenerational continuity in child maltreatment: mediating mechanisms and implications for prevention. *Child Development,* 82(1):162-176.

Berlin, L.J., Cassidy, J. & Appelyard, K. 2008. The influence of early attachments on other relationships. In Cassidy, J. & Shaver,P. (Eds.) *Handbook of Attachment*. New York: The Guilford Press.

Berlin, L. J., Zeanah, C. H. & Lieberman, A. F. 2008. Prevention and intervention programs for supporting early attachment security. In Cassidy, J. & Shaver, P.R. (Eds.) *Handbook of Attachment Theory*. New York: The Guilford Press.

Berlin, L.. J., Shanahan, M. & Carmody, K. A. 2013. Promoting supportive parenting in new mothers with substance use problems: a pilot randomised trial of residential treatment plus an attachment-based parenting programme. *Infant Mental Health Journal, 35*(1), 81-85.

Bernier, A., Beauchamp, M. H., Carlson, S. M. & Lalonde, G. 2015. A secure base from which to regulate: attachment security in toddlerhood as a predictor of executive functioning at school entry. *Developmental Psychology,* 51(9):1177-1189.

Bernier, A., Gagne-Matte, C., Belanger, M.E. & Whipple, N. 2014. Taking stock of two decades of attachment transmission gap: broadening the assessment of maternal behaviour. *Child Development,* 85(5):1852-1865.

Bick, J. & Dozier, M. 2013. The effectiveness of an attachmet-based intervention in promoting foster mothers' sensitivity towards foster infants. *Infant Mental Health,* 34(2):95-103.

Bishop, F. L. 2014. Using mixed methods research designs in health psychology:an illustrated discussion from a pragmatist perspective. *British Journal of Health Psychology,* 20(1):5-20.

Blanchard, A. & Lyons, M. 2016. Sex differences between primary and secondary psychopathy, parental bonding and attachment style. *Evolutionary Behavioural Sciences,* 10(1):56-63.

Bless, C., Higson-Smith, C. & Sithole, S. 2013. *Fundamentals of social research methods: an African perspective.* Cape Town: Juta.

Blumberg, S. 2013. *A psychoanalytic exploration of african grandmother's cultural knowledge on mothering and attachment.* Witwatersrand: University of the Witwatersrand. (MSW Mini- Dissertation).

Blumer, M.L.C., Hertlein, K.M. & Fife, S.T. 2012. It's not easy becoming green: student therapist perceptions of family therapy in an eco-sustainable age. *Contemporary Family Therapy,* 34:72-88.

Bohr, Y., Halpert, B., Chan, J., Lishak, V. & Brightling, L. 2010. Community based parenting training: do adapted evidence-based programmes improve parent-infant interactions. *Journal of Reproductive and Infant Psychology,* 28(1):55-68.

Bojanowski, J. J. & Ammen, S. 2011. Discriminating between pre versus post-Theraplay treatment Marshak Interaction Methods using The Marshak Interaction Method rating system. *International Journal of Play Therapy,* 20 (1):1-11.

Bojuwoye, O. 2009. Personal, familial and environmental perspectives in children's reactions to parental divorce in South Africa. *Journal of Family Studies,* 15(3):260-273.

Booth, P. B., & Jernberg, A. M. (2010). Learning the basics of the Theraplay method. In P. B. Booth & A. M. Jernberg, (Eds.), *Theraplay. Helping parents and children build better relationships through attachment-based play*. 3rd ed. San Francisco, CA: John Wiley & Sons, Inc.

Booth, P. B., & Lindaman, S. (2010). Understanding the theory and research that inform the core concepts of theraplay. In P. B. Booth & A. M. Jernberg, (Eds.), *Theraplay. Helping parents and children build better relationships through attachment-based play*. 3rd ed. San Francisco, CA: John Wiley & Sons, Inc.

Bosmans, G., Van de Walle, M., Goossens, L. & Ceulemans, E. 2014. Attachment in middle childhood: secure base script evidence in diary data. *Behavioural Change,* 31(4):225-242.

Bowers, B., Cohen, L. W., Elliot, A.E., Grabowski, D. C., Fishman, N. W., Sharkey, S.S., Zimmerman, S., Horn, S.D. & Kemper, P. 2013. Creating and Supporting a Mixed Methods Health Services Research Team. *Health Services Research,* 48(6):2157-2180.

Bowlby, R. 2007. Babies and toddlers in non-parental day-care can avoid stress and anxiety if they develop a lasting secondary attachment bond with one carer who is consistently accessible to them. *Attachment and Human Development,* 9(4):307-319.

Bretherton, I. & Munholland, K. A. 2008. Internal working models in attachment relationships. In Cassidy. J. & Shaver P.R. (Eds.) *Handbook of Attachment*. New York: The Guilford Press.

Brenning, K., Soenens, B. & Braet, C., 2017. Testing the incremental value of a separate measure for secure attachment relative to a measure for attachment anxiety and avoidance: a study in middle childhood and early adolescence. *European Journal of Psychological Assessment,* 33(1):5-13.

Brooker, R. J., Buss, K. A., Lemery-Chalfant, K., Aksan, N., Davidson, R. J. & H Hill, G. 2013. The development of stranger fear in infancy and toddlerhood: normative development, individual differences, antecedents and outcomes. *Developmental Science,* 16(6):864-878.

Bryman, A. 2012. *Social research methods.* New York: Oxford University Press.

Cadman, T., Diamond, P.R. & Fearon, P. 2018. Reassessing the validity of the attachment Q-Sort: an updated meta-analysis. *Infant Child Development*, 27:1-54.

Casanueva, C., Goldman-Fraser, J., Ringeisen, H., Lederman, C., Katz, L. & Osofsky, J.D. 2010. Maternal perceptions of temperament among infants and toddlers investigated for maltreatment: implications for services need and referral. *Family Violence,* 25(6):557-574.

Casement, P. J. 1991. *Learning from the patient.* New York: Guidford Press.

Cassibba, R., Castoro, G., Costantino, E., Sette, G. & Van Ijzendoorn, M.H. 2015. Enhancing maternal sensitivity and infant attachment security with video feedback. An exploratory study in Italy. *Infant Mental Health Journal,* 36(1):53-61.

Cassidy, J. 1999. The Nature of the Child's ties. In Cassidy, J. & Shaver, P. (Eds.) *Overview of attachment theory; Implications for theory, research and clinical intervention*. New York: Guildford.

Chandre, G. & Ward, C. 2015. *Positive parenting in South Africa - why supporting families is key to development and violence prevention.* Pretoria: Institute for Security Studies, 77:1-8.

Chau-Ying Leu, J. 2008. Early childhood music education in Taiwan: an ecological systems perspective. *Arts Education Policy Review,* 109(3):17-26.

Chen, C.J., Sung, H.C., Chen, Y.C., Chang, Y.C. & Lee, M.S. 2013. The development and psychometric evaluation of the Chinese version of the maternal attachment inventory. *Journal of Clinical Nursing,* 22(2):687-2695.

Chetwin, F. 2010. *Attachment for a Group of Black South African children during Apartheid.* Johannesburg: University of the Witwatersrand. (MA Dissertation).

Choi, J.J., Kapp, S.A. & Green, D.L. 2010. A Qualitative Study of Victim Offender Mediation: Implications for Social Work. *Journal of human behaviour in the social environment,* 20(7):857-874.

Christopher, A.J. 2002. *The atlas of changing South Africa.* 2nd ed. London: Routledge Taylor & Francis Group.

Codrington, G. 2008. Detailed introduction to generational theory. *TomorrowToday* (July):1-15.

Combs-Orme, T. & Renkert, L.E. 2009. Fathers and their infants: caregiving and affection in the modern family. *Journal of Human Behaviour in the Social Environment,* 19(4):394-418.

Conradt, E. & Ablow, J. 2010. Infant physiological response to the still-face paradigm: contributions of maternal sensitivity and infants' early regulatory behavior. *Infant Behavior & Development,* 33:251-265.

Cooper, P.J., Cooper, H., Radford, T., Sharples, A., Tomlinson, M. & Murray, L. 2014. Promoting mother-infant book sharing and infant attention and language develpment in an impoverished South African population: a pilot study. *Early Childhood Education,* 42(2):143-152.

Cooper, P.J., Tomlinson, M., Swartz, L., Landman, M., Molteno, C., Stein, A., McPherson, K & Murray, L. 2009. Improving quality of mother-infant relationship and infant attachment in socioeconomically deprived community in South Africa: randomised controlled trial. *British Medical Journal (Online First),* 1-8. Retrieved from http://www.bmj.com

Cope, D. G. 2014. Methods and Meanings: Credibility and Trustworthiness of Qualitative Research. *Oncology Nursing Forum,* 41(1):89-91.

Costa, R.M. & Brody, S. 2011. Anxious and avoidant attachment, vibrator use, vaginal sex and impaired vaginal orgasm. *Journal of Sexual Medicine,* 8(9):2493-2500.

Countries Quest, 2015. *People, Ethnic Groups.* Available: http://www.countriesquest.com (Accessed: 2016/14/11).

Cozolino, L. 2010. *The Neuroscience of Psychotherapy. Healing the Social Brain*. London: W.W. Norton & Company.

Creswell, J. 2013. *Qualitative inquiry and research design: Choosing among five approaches*. Los Angeles, CA: Sage.

Creswell, J. & Clark, V. 2007. *Designing and Conducting Mixed Methods Research.* Los Angeles, CA: Sage.

Creswell, J., Clark, J., Gutmann, V.H. & Creswell, J. 2008. An expanded typology for classifying mixed method research into designs. In V.P. Clark & Creswell, J. *The Mixed Methods Reader.* Thousand Oaks, CA: Sage.

Crittenden, P.M.K., Claussen, A.H. & Kozlowska, K. 2007. Choosing a valid assessment of attachment for clinical use: a comparative study. *ANZJFT,* 28(2):78-87.

Cullen, S. M., Cullen, M.A., Lindsay, G. & Strand, S. 2013. The parenting early intervention programme in England, 2006–2011; a classed experience? *British Educational Research Journal,* 39(6):1025–1043.

Daryn, H.D., Gelberg, L. & Suchman, N.E. 2012. Implications of homelessness for parenting young children: a preliminary review from a developmental attachment perspective. *Infant Mental Health,* 33(1):1-9.

Datler, W., Hover-Reisner, N., Furstaller, M. & Datler, M. 2014. Young child observation used as a research tool: investigating toddler development in day-care nurseries. In Adamo, S.M.G. & Kustin, M. *Young Child Observation. A Development in the Theory and Method of Infant Observation*. London: Karnac

Dawson, N., Bain, K. & Mesman, J. 2018. Comparing two measures of maternal sensitivity: goodness of fit with a South African cultural context. *Attachment & Human Development,* 20*:*1-9.

Del Rosario, M., Gillespie-Lynch, K., Johnson, S., Sigman, M. & Hutman, T. 2014. Parent reported infant trajectories among infant siblings of children with autism. *Journal of Autism and Developmental Disorders,* 44:381-393.

Delawarde, C., Saias, T. & Briffault, X. 2014. The public health dogma of evidence-based mental disorders prevention and mental health promotion: french professionals beliefs in regard to parenting programs. *Health Sociology Review,* 23(3):166-177.

Delius, A., Bovenschen, I. & Spangler, G. 2008. The inner working model as a "theory of attachment": developing during the pre-school years. *Attachment and Human Development,* 10(4):395-414.

Delport, C.S.L. & Fouche, C.B. 2011. Mixed methods research. In De Vos, A.S., Strydom, H., Fouche, C.B., & Delport, C.S.L. *Research at Grass Roots. For the social sciences and human service professions*. 4th ed. Pretoria: Van Schaik.

Delport, C.S.L & Roestenburg, W. J.H. 2011. Quantitative data collection methods: questionnaires, checklists, structured observation and structured interview schedules. In De

Vos, A.S., Strydom, H., Fouche, C.B. & Delport., C.S.L. *Research at Grass Roots: For the social sciences and human service professions*. 4th ed. Pretoria: Van Schaik.

Department of Social Development. 2013. Annual Report. Available: http://pmg.org.za/policy-documents/957 (Accessed 2017/07/24).

Dexter, C. A., Wong, K., Stacks, A.M., Beeghly, M. & Barnett, D. 2013. Parenting and attachment among low income African American and Caucasion preschoolers. *Journal of Family Psychology,* 27(4):629-638.

Dhar, R. 2012. Childcare practices amongst construction workers in Chira Chas, Jharkhand. *Child Care in Practice,* 18(1):23-50.

Dicicco, B. & Crabtree, B. 2006. The qualitative research interview. *Medical Education,* 40(4): 314-321.

Dimitrov, D.M. & Rumrill, P.D. 2003. Pretest-posttest designs and measurement of change. *Work (Reading Mass),* 20(2):159-165.

Donnelly, C., Brenchley, C., Crawford, C. & Letts, L. 2013. The integration of occupational therapy into primary care: a multiple case study design. *Family Practice,* 14(60):1-12.

Drosdova, K. & Gaubatz, K.T. 2014. Reducing uncertainty: information analysis for comparative case studies. *International Studies Quarterly*, 58:633-645.

Duschinsky, R., 2015. The emergence of the disorganised, disorientated, attachment classification, 1979-1982. *History of Psychology,* 18(1):32-46.

Du Toit, L. 2014. Shifting meanings of postconflict sexual violence in South Africa. *Journal of Women in Culture and Society,* 40(1):101-123.

Dwiwardini, C., Hill, P.C., Bollinger, R. A., Marks, L.E., Steele, J.R., Doolin, H.N., Woods, S.L, Hook, J. N. & Davis, D. E. 2014. Virtues develop from a secure base: attachment and resilience as predictors of humility, gratitude and forgiveness. *Journal of Psychology and Theology,* 42(1):83-90.

Egeland, B. 2009. Attachment-based intervention and prevention *programs for young children. Encyclopedia on Early Childhood Development.* Available: http//www.childencyclopaedia.com/documents/EnglandANGxp.rev.pdf (Accessed 05/06/25)

Elizabeth Mckenna, Y. 2009. *Cultural influences on attachment behaviours.* Alberta: University of Lethbridge (MSW Mini-Dissertation).

Everett, G.E., Hupp, S.D.A. & Olmi, D.J. 2010. Time-out with parents: a descriptive analysis of 30 years of research. *Education and treatment of children,* 33(2):235-259.

Farnfield, S., Hautamaki, A., Norbech, P. & Sahhar, N. 2010. DMM assessments of attachment and adaptation: procedures, validity and utility. *Clinical Child Psychology and Psychiatry,* 15(3):313-328.

Fatti, G., Shaikh, N., Eley, B. & Grimwood, A. 2016. Effectiveness of community-based support for pregnant women living with HIV: a cohort study in South Africa. *Aids Care,* 28(1):114-118.

Felton, L. & Jowett, S. 2013. The mediating role of social environment factors in the associations between attachment styles and basic needs satisfaction. *Journal of Sports Sciences, 31*(6):618-628.

Flanagan, C. 2002. *Early socialisation: sociability and attachment.* New York: Routledge.

Fouché, C.B. & Bartley, A. 2011. Quantitative data analysis and interpretation. In De Vos, A.S., Strydom, H., Fouché, C.B., & Delport, C.S.L. *Research at Grass Roots: For the social sciences and human service professionals.* 4th ed. Pretoria.Van Schaik.

Fouché, C.B. & Shurink, W. 2011. Qualitative research designs. In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L. *Research at Grass Roots: For the social sciences and human service professions.* 4th ed. Pretoria: Van Schaik.

Fouché, C.B., Delport, C.S.L & De Vos, A.S. 2011. Quantitative research designs. In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L. *Research at Grass Roots: For the social sciences and human service professions.* 4th ed. Pretoria: Van Schaik.

Fouka, G. & Mantzorou, M. 2011. What are the major ethical issues in conducting research? Is there a conflict between the research ethics and the nature of nursing? *Health Science Journal,* 5(1):3-14.

Fox, N.A., Barker, T.V., White, L.K., Suway, J.G. & Pine, D.S. 2013. Commentary? To intervene or not? Appreciating or treating individual differences in childhood temperament-remarks on Rapee (2013). *Journal of Child Psychology and Psychiatry*, 54(7):789-790.

Fraser, M.W. & Galinsky, M.J. 2011. *Steps in intervention research: designing and developing social programs.* North Carolina: Sage.

Freeman, P.A. 2014. Prevalence and relationship between adverse childhood experiences and child behaviour among young children. *Infant Mental Health,* 36(6):544-554.

Funamoto, A. & Rinaldi, C. 2014. Measuring Parent-Child mutuality. A review of current observational coding systems. *Infant mental health,* 36(1):3-11.

García Coll, C. G., & Magnuson, K. (2000). Cultural differences as sources of developmental vulnerabilities and resources. In J. P. Shonkoff & S. J. Meisels, (Eds.), *Handbook of early childhood intervention* (pp. 94-114). 2nd ed. Cambridge: Cambridge University Press.

George, C., Kolodziej, N., Rendall, M. & Coiffait, F.M. 2014. The effectiveness of a Learning Disability specific group parenting programme for parents of pre-school and school age children. *Educational & Child Psychology,* 31(4):18-29.

Gerald, J., Malla, A. & Lyer, S.N. 2016. Posttraumatic growth following a first episode of psychosis: a mixed methods research protocol using a convergent design. *BMC Psychiatry,* 16(262):1-10.

Gergen, K.J., Josselson, R. & Freeman, M. 2015. The promises of qualitative inquiry. *American Psychological Association*, 70(1):1-9.

Greenspan, S.I. & Wieder, S. 2006. *Infant and Early Childhood Mental Health. A Comprehensive Developmental Approach to assessment and intervention.* Washington: American Psychiatric Publishing.

Goldenring Fine, J. & Sung, C. 2014. Neuroscience of Child and Adolescent Health Development. *Journal of Counseling Psychology,* 61(4):521-527.

Gomez-Scott, J. & Cooney, T.M. 2014. Young women's education and behavioural risk trajectories: clarifying their association with unintended pregnancy resolution. *Culture, Health and Sexuality,* 16(6):648-665.

Grant, C. & Osanloo, A. 2014. Understanding, selecting and integrating a theoretical framework in dissertation research: creating the blueprint for your 'House'. *Administrative Issues Journal,* 4(2):12-26.

Gray, S. 2015. Widening the circle of security: a quasi experimental evaluation of attachment based professional development for family child care providers. *Infant Mental Health,* 36(3):308-319.

Greig, A., Taylor, J. & Mackay, T. 2007. *Doing research with children.* Los Angeles, CA: Sage Publications.

Grinnell, R. M. & Unrau, Y.A. 2011. *Social work research and evaluation-Foundations of evidence-based practice.* 9th ed. New York: Oxford Uuniversity Press.

Guckin, C.M., Minton, S.J. & Stephen, J. 2013. From theory to practice: two ecosystemic approaches and their applications to understanding school bullying. *Australian Journal of Guidance and Counselling,* 24(1):36-48.

Gunning, M., Conroy, S., Valoriani, V., Figueiredo, B., Kammerer, M.H., Glatigny-Dallay, E. & Murray, L. 2004. Measurement of mother-infant interactions and the home environment in a European setting: preliminary results from a cross cultural study. *British Journal of Psychiatry,* 184(46):38-44.

Gyungjoo, L., McCreary, L., Breitmayer, B., Kim, M.J. & Yang, S. 2013. Promoting mother-infant interaction and infant mental health in low income Korean families: Attachment-based cognitive behavioural approach. *Journal for Specialists in Pediatric Nursing,* 18(4):265-276.

Hardudh-Dass, H. 2011. *African mother's experiences of the new beginnings mother-infant group psychotherapy programme: reflecting on mothering while living in a shelter.* Johannesburg: University of the Witwatersrand. (MSW Mini-Dissertation).

Hale, D. & Frusha, C. 2016. MRI brief therapy; a tried and true systemic approach. *Journal of Systemic Therapies*, 35(2):14-24.

Hall, R., Hoffenkamp, H., Tooten, A., Braeken, J., Vingerhoets, A.J.J.M. & Bakel, H.J.A. 2015. Longitudinal associations between maternal disrupted representations, maternal interactive behaviour and infant attachment: a comparison between full term and pre-term dyads. *Child Psychiatry and Human Development,* 46(2):320-331.

Haltigan, J.D., Leerkes, E.M., Supple, A.J. & Calkins, S.D. 2014. Infant negative affect and maternal interactive behaviour during the still face procedure: the moderating role of adult attachment states of mind. *Attachment and Human Development,* 16(2):149-173.

Haltigan, J.D., Leerkes, E.M., Wong, M.S., Fortuna, K., Roisman, G.I., Supple, A.J., O'Brien, M., Calkins, S.D. & Plamondon, A. 2014. Adult attachment states of mind: measurement invariance across ethnicity and associations with maternal sensitivity. *Child Development,* 85(3):1019-2035.

Harrell, M.C. & Bradley, M.A. 2009. *Data Collection Methods, Semi-structured interviews and focus groups.* Pittsburgh: Rand Corporation.

Hatch, J. A. 2002. *Doing qualitative research in education settings.* Boston: Suny Press.

Hayem, J. 2013. From May 2008 to 2011: Xenophobic violence. *Journal of Southern African Studies,* 39(1):77–97.

Hedges, F. 2005. *An introduction to systemic therapy with individuals.* New York: Palgrave Macmillan.

Henderson, D.A. & Thompson, C.L. 2011. *Counseling Children.* 8th ed. Belmont, CA: Brooks/Cole, Cengage Learning.

Hirschmann, N., Kastner-Koller, U., Deimann, P., Aigner, N. & Svecz, T. 2011. INTAKT: a new instrument for assessing the quality of mother-child interactions. *Psychological Test and Assessment Modeling,* 53(3):295-311.

Holmes, J. & Slade, A. 2018. *Attachment in Therapeutic Practice*. London: Sage.

Horenczyk, P., Schiff, M. & Brom, D. 2015. Emotion regulation in mothers and young children faced with trauma. *Infant Mental Health,* 36(3):337-348.

Howes, C. & Spieker, S. 2008. Attachment relationships in the context of multiple care-givers. In Cassidy J., & Shaver P.R. (Eds.) *Handbook of Attachment.* New York: The Guilford Press.

Huber, A., McMahon, C.A. & Sweller, N. 2015. Efficacy of the 20-week Circle of Security intervention: changes in care-giver reflective functioning, representations and child attachment in an Australian clinical sample. *Infant Mental Health Journal,* 36(6):556-574.

Idang, G.E. 2015. African culture and values. *Phronimon*, 16(2):97-111.

Izugbara, C., Ochako, R. & Izugbara, C. 2011. Gender scripts and unwanted pregnancy amongst urban Kenyan women. *Culture, Health and Sexuality,* 13(9):1031-1045.

Jacomijnitje, H. 2009. *Attaching Cultures: The Role of Attachment Styles in explaining Majority Members Acculturation Attitudes.* Groningen: Rijksuniversiteit Groningen.

Jama Shai, N. & Sikweyiya, Y. 2015. *Programmes for change: Addressing initmate partner violence in South Africa.* Pretoria: SA Crime Quarterly, 2015(51):31-41.

Jennings, S. 2011. *Healthy Attachments and Neuro-Dramatic Play.* London: Jessica Kingsley Publishers.

Jones, J.D. & Cassidy, J. 2014. Parental attachment style: examination of links with parent secure base provision and adolescent secure base use. *Attachment and Human Development,* 16(5):437-461.

Jordan, G., Malla, A. & Lyer, S.N. 2016. Posttraumatic growth following a first episode of psychosis: a mixed methods research protocol using a convergent design. *BMC Psychiatry,* 16(262):1-10.

Jovanovic, J. 2011. Saying goodbye: an investigation into parent and infant separation behaviours on arrival in childcare. *Childcare in Practice,* 17(3):247-269.

Kalinauskiene, L., Cekuoliene, D., Van Ijzendoorn, M., Bakermans-Kranenburg, M., Juffer, F. & Kusakovskaja, I. 2009. Supporting insensitive mothers: the vilnius randomised control trial of video feedback intervention to promote maternal sensitivity and infant attachment security. *Child: Care, Health and Development,* 35(5):613-623.

Karasik, L.B., Tamis Le-Monda, C.S. & Adolph, K.E. 2014. Crawling and walking infants illicit different verbal responses from mothers. *Developmental Science,* 17(3):388-395.

Keller, H. 2015. Attachment and Culture. *Journal of Cross-Cultural Psychology,* 44(2):175-194.

Kennedy, M., Betts, L.R. & Underwood, J.D. 2014. Moving beyond the mother child dyad: exploring the link between maternal sensitivity and sibling's attachment styles. *The Journal of Genetic Psychology,* 175(4):287-300.

Kennedy, M., Betts, L.R. & Underwood, J.D. 2014. Moving beyong the mother-child dyad: exploring the link between maternal sensitivity and sibling attachmet styles. *Journal of Genetic Psychology,* 174(4):287-300.

Kerr, P. & Durrheim, K. 2013. The dilemma of anti-xenophobia discourse in the aftermath of violence in de doorns. *Journal of Southern African Studies*, 39(3):577–596.

Klein, J. 1987. *Our need for others.* London: Tavistock.

Kobak, R. 1999. The Emotional Dynamics of Disruptions in Attachment Relationships. In Cassidy, J. & Shaver, P. (Eds.) *Overview of Attachment Theory; Implications for theory, research and clinical interventions*. New York: Guildford Press.

Kondrat, M. E. 2002. Actor-centered social work: revisioning "Person-in-Environment" through a critical theory lens. *National Association of Social Workers,* 47(4):435-448.

Kothari, C. 2004. *Research methodology, methods and techniques.* New Delhi: New Age International.

Kuyper, J.W. 2016. Advancing justice and democracy beyond the state: feasibility through flexibility. *Political Studies,* 64(2):417–435.

Kynoch, G. 2016. Apartheid afterlives: violence, policing and the South African state. *Journal of Southern African Studies,* 42(1):65-78.

Lawford-Smith, H. & Gilabert, P. 2012. Political feasibility: a conceptual exploration. *Political Studies,* 60(4):809–825.

Lee, G., McCreary, L., Breitmayer, B., Kim, M.J. & Yang, S. 2013. Promoting mother-infant interaction and infant mental health in low income Korean families: attachment-based cognitive behavioural approach. *Journal for specialists in Pediatric Nursing,* 18(4):265-276.

Leedy, P. & Ormrod, J. 2014. *Practical Research: Planning and Design.* Northern Colorado: Pearson.

Leerkes, E.M., Supple, A.J., O'Brien, M., Calkins, S.D., Haltigan, J.D., Wong, M.S. & Fortuna, K. 2015. Antecedents of maternal sensitivity during distressing tasks: integrating attachment, social information processing and psychobiological perspectives. *Child Development,* 86(1):94-111.

Lefmann, T. & Combs-Orme, T. 2013. Early brain development for social work practice: integrating neuroscience with Piaget's theory of cognitive development. *Journal of Human Behaviour in the Social Environment*, 23(5):640-647.

Leitz, C., Langer, C.L. & Furman, R. 2006. Establishing trustworthiness in qualitative research in social work. Implications from a study regarding spirituality. *Qualitative Social Work,* 5(4):441-458.

Levy, T.M. & Orlans, M. 2014. *Attachment, Trauma and Healing*. London: Jessica Kingsley Publishers.

Lincoln, Y. & Guba, E. 1985. *Naturalistic Inquiry.* London: Sage.

Lindberg, M.A., Fugett, A. & Thomas, S.W. 2012. Comparing measures of attachment; to whom one turns in times of stress, parental warmth and partner satisfaction. *The Journal of Genetic Psychology,* 173(1):41-62.

Louw, D. & Louw, A. 2014. *The Neonatal phase and Infancy.* In Louw, D. & Louw, A. *Child and Adolescent Development.* 2nd ed. Bloemfontein: Psychology Publications.

Louw, D., Louw, A. & Kail, R. 2014. Basic concepts of child and adolescent development. In Louw, D. & Louw, A. *Child and Adolescent Development.* 2nd ed. Bloemfontein: Psychological Publications.

Madigan, S., Atkinson, L., Laurin, K. & Benoit, D. 2013. Attachment and internalizing behaviours in early childhood: a meta-analysis. *Developmetal Psychology,* 49(4):672-689.

Mahler, M., Pine, F. & Bergman, A. 2000. *The psychological birth of the human infant.* New York: Guilford.

Main, M., Hesse, E. & Kaplan, N. 2005. *Attachment from infancy to adulthood.* New York: The Guilford Press.

Maluleke, M.J. 2012. Culture, tradition, custom, law and gender equality. *P.E.R,* 15(1):1-22.

Manser, T. & Mitchell, L. 2012. Attachment from infancy to adulthood. *Human Factors and Ergonomics Society.*Available: http://www.interaction-design.org/literature/conference/proceedings (Accessed 2017/06/13).

Marmarosh, C.L. 2015. Emphasizing the complexity of the relationship: the next decade of attachment-based psychotherapy research. *Psychotherapy,* 52(1):12-18.

Martins, E.C., Soares, I., Martins, C., Tereno, S. & Osorio, A. 2012. Can we identify emotion over regulation in infancy? Associations with avoidant attachment, dyadic emotional interaction and temperament. *Infant and Child Development,* 21:579-595.

Marvin, R. & Britner, P. 2008. The Ontogeny of attachment. In Cassidy, J. & Shaver, P. *The Handbook of Attachment: theory, research and clinical applications*. 2nd ed. New York: The Guilford Press

Marvin, R., Cooper, G., Hoffman, K. & Powell, B. 2002. The Circle of Security project: attachment-based intervention with caregiver pre-school child dyads. *Attachment & Human Development,* 4(1):107-124.

Martorell, G., Papalia, D.E. & Feldman, R.D. 2014. *A child's World. Infancy through Adolescence.* New York: McGraw Hill.

Mawani, F. N. 2001. *Attachment across cultures toolkit-English.* Toronto: St. Joseph's Women's Health Centre.

Mayer, L.M. & Whiting Blome, W. 2013. The importance of early, targeted intervention: the effect of family, maternal, and child characteristics on the use of physical discipline. *Journal of Human Behavior in the Social Environment,* 23(2):144–158.

Mesman, J., Van IJzendoorn, M.H. & Bakermans-Kranenburg, M. J. 2009. The many faces of the Still-Face Paradigm: a review and meta-analysis. *Developmental Review,* 29:120–162.

Mc Guckin, C. & Minton, J. 2014. From theory to practice: two ecosystemic approaches and their applications to understanding school bullying. *Australian Journal of Guidance and Counselling,* 24(1):36-48.

Mckenna, E.Y. 2009. *Cultural influences of attachment behaviours*. Lethbridge: University of Lethbridge. (MSW Mini Dissertation).

McLean, S., Riggs, D., Kettler, L. & Delfabbro, P. 2013. Challenging behaviour in out of home care: use of attachment ideas in practice. *Child and Family Social Work,* 18(3):243-252.

Mercer, J. 2015. Examining Circle of Security: a review of research and theory. *Research on Social Work Practice,* 25(3):382-392.

Miller, P.M. & Commons, M.L. 2010. The benefits of attachment parenting for infants and children: a behavioural developmental view. *Behavioural Development Bulletin,* 16(1):1-14.

Miller, W.L., Crabtree, B.F, Harrison, M.I., & Fennell, M.L. 2013. Integrating mixed methods in health services and delivery system research. *Health Services Research*, 48(6):2125-2133.

Minde, K., Minde, R. & Vogel, W. 2006. Culturally sensitive assessment of attachment in children aged 18-40 months in a South African township. *Infant Mental Health,* 27(6):544-558.

Mingo, M.V. & Easterbrooks, M.A. 2015. Patterns of emotional availability in mother-infant dyads: associations with multiple levels of context. *Infant Mental Health,* 36(5):469-482.

Mkwanazi, N.B., Rochat, T.J. & Bland, R.M. 2015. Living with HIV, disclosure patterns and partnerships, a decade after the introduction of HIV programmes in rural South Africa. *Aids Care,* 27(1):65-72.

Moffitt, T.E. 2002. Teen aged mothers in contemporary Britain. *Journal of child psychology and psychiatry,* 43(6):727-742.

Moore, K.A. 2008. *Quasi-Experimental Evaluations*. 1-4. Available: http://www.childtrends.org (Accessed 10/04/2017).

Morse, J.M. 2015. Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research,* 25(9):1212-1222.

Moss, E., Lecompte, V., Pascuzzo, K., Dubois-Comtois, K., Cyr, C., Tarabulsy, G.M., St-Laurent, D., Bernier, A. 2012. Evidence for the efficacy of attachment-based interventions for maltreating parents and their children. *Integrating Science and Practice, 2*(1), 5-7.

Murray, J. 2009. A postcolonial and feminist reading of selected testimonies to trauma in post-liberation South Africa and Zimbabwe. *Journal of Arican Cultural Studies,* 21(1):1-21.

Muruya, S. & Sebitloane, H. 2013. Contraceptive use and prevalence of sexually transitted infections amongst women seeking termination of pregnancy at a district hospital in Kwazulu Natal. *Southern African Journal of Epidemiology and Infection*, 28(3):172-176.

Naidoo, U., Zungu, L. & Hoque, M.E. 2013. Awareness, utilization and attitudes towards emergency contraception among women attending a primary health care clinic in Durban, South Africa. *Biomedical Research,* 24(3):341-346.

Nelson, J. K. 2005. *Seeing through Tears: Crying and Attachment.* New York: Routedge.

Neuman, W. 2014. *Basics of Social Research*. 7th ed. Boston: Allyn & Bacon.

Nieuwenhuis, J. 2016a. Introducing qualitative research. In Maree, K. (Ed.) *First steps in research.* 2nd ed. Pretoria: Van Schaik Publishers.

Nieuwenhuis, J. 2016b. Qualitative research designs and data-gathering techniques. In Maree, K. (Ed.) *First steps in research.* 2nd ed. Pretoria: Van Schaik Publishers.

Nygren, M. 2014. The attachment projective system. *Rorshachiana,* 35(2):236-238.

O'Connor, E.E., Collins, B.A. & Supplee, L. 2012. Behaviour problems in late childhood: the roles of early maternal attachment and teacher-child relationship trajectories. *Attachment and Human Development,* 14(3):265-288.

O'Connor, B. & Scott, S. 2007. *Parenting and outcomes for children.* London: Joseph Rowntree Foundation.

Ogden. H.T. 2014. Fear of breakdown and the unlived life. *Institute of Psychoanalysis*, 95(2):205-223.

Orb, A., Eisenhauer, L. & Wyanaden, D. 2001. Ethics in Qualitative Research. *Journal of Nursing Scholarship,* 33(1):93-96.

Paetzold, R.L., Rholes, W.S. & Kohn, J.L. 2015. Disorganised attachment in adulthood: theory, measurement and implications for romantic relationships. *Review of General Psychology,* 19(2):146-156.

Palinkas, L.A., Bazzi, A.R., Syvertsen, J.L., Ulibarri, M.D. & Hernandez, D. 2016. Measuring current drug use in female sex workers and their noncommercial male partners in mexico: concordance between data collected from surveys versus semi-structured interviews. *Substance Use and Misuse,* 51(1):23-33.

Pallini, S. & Laghi, F. 2012. Attention and attachment related behaviours towards professional care-givers in child care centres. *Journal of Genetic Psychology,* 173(2):158-174.

Parliamentary Liaison Office, 2013. *The White Paper on the Family*. Available: http: //www.cplo.org.za (Accessed:2018/09/07).

Payne, S.G., Meddis, K. & Mahar, N. 2015. Correlates of child and family outcomes in an Australian community based early childhood intervention program. *Journal of Intellectual & Developmental Disability,* 40(1):57–67.

Pignotti, M. 2011. Reactive attachment disorder and international adoption: a systematic synthesis. *The Scientific Review of Mental Health Practice,* 8(1):30-49.

Plummer, P. 2017. Focus group methodology. Part 2: Considerations for analysis. *International Journal of Therapy and Rehabilitation,* 24(8):345-351.

Polek, E. 2007. *Attachment in Cultural Context.* Groningen: Grafex

Pruijssers, A., van Meijel, B., Maaskant, M., Keeman, N. & van Achterberg, T. 2016. Quality of diagnosis and treatment plans after using the 'diagnostic guidelines for anxiety and challenging behaviours' in people with intellectual disabilities: a comparative multiple case study design. *Journal of Applied Research in Intellectual Disabilities,* 29(4):305–316.

Purvis, K.B., Mckenzie, L. B., Cross, D.R. & Razuri, E.B. 2013. A spontaneous emergence of attachment behaviour in at risk children and a correlation with sensory deficits. *Journal of Child and Adolescent Psychiatric Nursing,* 26(3):165-172.

Rabe, M. & Naidoo, K. 2016. Families in South Africa. *South African review of Sociology*. 46 (4), 1-4

Ramsauer, B., Lotzin, A., Mühlhan, C., Romer, G., Nolte, T., Fonagy, P. & Powell, B. 2014. A randomized controlled trial comparing Circle of Security intervention and treatment as usual as interventions to increase attachment security in infants of mentally ill mothers: study protocol. *BMC Psychiatry,* 14(24):1-23.

Reuther, B.T. 2014. On our everyday being: Heidegger and attachment theory. *Journal of Theoretical and Philosophical Psychology,* 34(2):101-115.

Ringer, J.M., Buchanan, E.E., Olesek, K. & Lyksaker, P.H. 2014. Anxious and avoidant attachment styles and indicators of recovery in schizophrenia: associations with self-esteem and hope. *Psychology and Psychotherapy: Theory, Research and Practice*, 87(2):209-221.

Robinson, L. 2007. *Cross-Cultural Child Development for Social Workers.* New York*:* Palgrave Macmillan.

Rodger, H., Vizioli, L., Ouyang, X. & Caldara, R. 2015. Mapping the development of facial expression recognition. *Developmental Science,* 18(6):929-939.

Rosenblum, K.L., Zeanah, C., McDonough, S. & Muzika, M. 2004. Video-taped coding of working model of the child interviews: a viable and useful alternative to verbatim transcripts? *Infant Behaviour and Development,* 27(4):544-549.

Rossiter, C., Fowler, C., McMahon, C. & Kowalenko, N. 2012. Supporting depressed mothers at home: their views on an innovative relationship-based intervention. *Contemporary Nurse,* 41(1):90-100.

Rothbaum, F., Rosen, K., Ujiie, T. & Uchida, N. 2002. Family systems theory, attachment theory and culture. *Family Process,* 41(3):328-350.

Rothman, J. & Thomas, E.J. 2009. *Intervention Research: Design and Development for Human Sciences.* New York: Routledge.

Roulston, K. 2010. *Reflective Interviewing: A Guide to Theory and Practice.* Los Angeles: Sage Publications.

Rubertsson, C., Pallant, J.F., Sydsjo, G., Haines, H.M. & Hildingsson, I. 2015. Maternal depressive symptoms have a negative impact on prenatal attachment - findings from a Swedish sample. *Journal of Reproductive and Infant Psychology,* 33(2):153-164.

Sayre, M.M. & Walker, R. 2014. Evolutionary theory and neuroscience: an explanatory theory for social work. *Journal of human behaviour in the social environment*, 24(8):966-972.

Schenk, K.D. 2009. Community interventions providing care and support to orphans and vulnerable children: a review of evaluation evidence. *Aids Care,* 21(7):918-942.

Schore, A.N. 2000. Attachment and the regulation of the right brain. *Attachment and Human Development,* 2(1):23-47.

Sherman, L.J., Rice, K. & Jude, C. 2015. Infant capacities related to building internal working models of attachment figures: a theoretical and empirical review. *Developmental Review,* 37:109-141.

Shurink, W., Fouché, C.B. & De Vos, A.S. 2011. Qualitative data analysis and interpretation. In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L. *Research at Grass Roots. For the social sciences and human service professions.* 4th ed. Pretoria: Van Schaik.

Siegel, D.J. & Hatzell, M. 2003. *Parenting from the Inside Out.* New York: Penguin Putnam.

Sigelman, C.K. & Rider, E.A. 2009. *Life-Span Human Development.* Belmont, California: Wadsworth Cengage Learning.

Siller, M., Swanson, M., Gerber, A., Hutman, T. & Sigman, M. 2014. A parent mediated intervention that targets responsive parental behaviours increases attachment behaviours in children with ASD: results from a randomised clinical trial. *Journal of Autism and Developmental Disorders,* 44(7):1720-1732.

Setia, M.S. 2016. Methodology series module 5: sampling strategies. *Indian Journal of Dermatology,* 61(5):505-509.

Sinkovics, R.R. & Alfoldi, E.A. 2012. Progressive focusing and trustworthiness in qualitative research. *Management International Review,* 52(6):817–845.

Smeekens, S., Riksen-Walraven, J.M. & Van Bakel, H.J.A. 2009. The predictive value of infant different attachment measures for socio-emotional development at age 5 years. *Infant Mental Health,* 30(4):366-383.

Smith, P.K., Cowie, H. & Blades, M. 2011. *Understanding Children's Development*. 6th ed. West Sussex: John Wiley & Sons.

Soydan, H. 2015. Intervention research in social work. *Australian Social Work,* 68(3):324-337.

Statistics South Africa. 2017. Mid-year population estimates 2017. Available: http://www.statssa.gov.za (Accessed:2018/09/10)

Statistics South Africa. 2018. Mid-year population estimates 2018. Available: http://www.statssa.gov.za (Accessed 2018/10/22)

Steele, H. & Steele, M. 2008. *Clinical Applictions of the Adult Attachment Interview.* New York: The Guilford Press.

Stern, D.N. 2002. *The First Relationship.* London: Harvard University Press.

Stevens, F.L. 2014. Affect regulation styles in avoidant and anxious attachment. *Individual Differences Research,* 12(3):123-130.

Seven, S. 2010. Attachment and social behaviours in the period of transition from pre-school to first grade. *Social Behaviour and Personality*, 38(3):347-356.

Stoljar, N. 2011. Informed consent and relational conceptions of autonomy. *Journal of Medicine and Philosphy,* 36(4):375-384.

Strydom, H. 2011a. Sampling in the quantitative paradigm. In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport C.S.L. *Research at Grass Roots. For the social sciences and human service professions.* 4th ed. Pretoria: Van Schaik.

Strydom, H. 2011b. Ethical aspects of research in the social sciences and human service professions. In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport C.S.L. *Research at Grass Roots. For the social sciences and human service professions.* 4th ed. Pretoria: Van Schaik.

Taft, R.J., Schlein, C. & Ramsey, C.M. 2015. Home and school experiences of caring for children with reactive attachment disorder. *Journal of Ethnographic and Qualitative Research,* 9:237-246.

Teske, R.H. & Nelson, B.H. 2006. Acculturation and asssimilation: a clarification. *American Anthroplological Association,* 1(2):351-367.

Thomas, R.M. 2005. *Comparing Theories of Child Development*. Belmont, CA: Thomson Wadsworth

Tomlinson, M. 1997. Pathways to attachment: the strange situation and culture in the South African context. *South African Journal of Child and Adolescent Mental Health,* 9(2):107-122.

Tomlinson, M. 2001. Mother-infant attachment, culture and research: a pilot study. *South African Journal of Child and Adolescent Mental Health,* 13(1):41-54.

Tomlinson, M., Cooper, P. & Murray, L. 2005. The Mother-Infant Relationship and Infant Attachment in a South African Peri-Urban Settlement. *Child Development,* 76(5):1044-1054.

Uprichard, E. 2013. Sampling: bridging probability and non-probability designs. *International Journal of Social Research Methodology,* 16(1):1-12.

Van Ijzendoorn, M.H. & Sagi-Schwartz, A. 2008. Cross-cultural patterns of attachment. In Cassidy, J. & Shaver, P.R. (Eds.) *Handbook of Attachment*. New York: The Guilford Press.

Van Ijzendoorn, M. 2007. Attachment at an early age (0-5) and its impact on children's development. *Encyclopedia on Early Childhood Development*. Available: http://www.childencyclopedia.com/documents/vanIJzendoornANGxp.pdf (Accessed 2016/05/28)

Van Niekerk, C. & Nell, L. 2012. *Unlocking the potential of children and families.* Tswane: Child Welfare Tswane.

Velderman, M.K., Bakermans-Kranenburg, M.J., Juffer, F. & Van Ijzendoorn, M.H. 2006. Effects of attachment-based interventions on maternal sensitivity and infant attachment; differential susceptibility of highly reactive infants. *Journal of Family Psychology,* 20(2):266-274.

Vicedo, M. 2017. Putting attachments in its' place: disciplinary and cultural contexts. *European Journal of Developmental Psychology,* 14(6):684-699.

Wake, L. 2010. *The Role of Brief Therapy in Attachment Disorders.* London: Karnac Books.

Wallander, J.L., Bann, C.M., Biasini, F.J., Goudar, S.S., Pasha, O., Chomba, E., McClure, E. & Carlo, W.A. 2014. Development of children at risk for adverse outcomes participating in early intervention in developing countries: a randomized controlled trial. *Journal of Child Psychology and Psychiatry,* 55(11):1251–1259.

Weinfield, N.S., Stroufe, A.L., Byrne, E. & Carlson, E. 2008. Individual differences in infant-caregiver attachment: conceptual and empirical aspects of security. In Cassidy, J. & Shaver, P.R. (Eds.) *Handbook of Attachment; Theory, Research and Clinical Applications*. 2nd ed. New York: The Guilford Press.

Weir-Smith, G. 2016. Changing boundaries: overcoming modifiable arial unit problems related to unemployment data in South Africa. *South African Journal of Science,* 112(3):1-8.

Wessels, I. 2012. *Parenting programmes in South Africa: Investigating design and evaluation practices.* Johannesburg: University of the Witwatersrand. (MA Dissertation).

Welman, C., Kruger, F. & Mitchell, B. 2012. *Research Methodology.* 3rd ed. Cape Town: Oxford University Press

Whipple, N., Bernier, A. & Mageau, G. 2009. Attending to the Exploration side of Infant Attachment: Contributions from Self-Determination Theory. *Canadian Psychology,* 50(4):219-229.

Whitcomb, D.A. 2012. Attachment, occupation and identity: considerations in infancy. *The Journal of Occupational Science Incorporated,* 19(3):271-282.

Woolgar, M. & Baldock, E. 2015. Attachment Disorders versus more comon problems in looked after and adopted children: comparing community and expert assessments. *Child and Adolescent Mental Health,* 20(1):34-40.

Yee, C.I. & Shiota, M.N. 2015. An insecure base: attachment style and orienting response to positive stimuli. *Psychophysiology,* 52(7):905-909.

Zeanah, C.H. & Gleason, M.M. 2015. Annual research review: attachment disorders in early childhood: Clinical presentation, correlates and treatment. *Journal of Child Psychology and Psychiatry,* 56(3):207-222.

Zeanah, C.H., Berlin, L. J. & Boris, N.W. 2011. Practitioner review: clinical applications of attachment theory and research for infants and young children. *Journal of Child Psychology and Psychiatry,* 52(8):819-833.

APPENDIX A

Ethical Approval - Netcare Hospital

Netcare Hospital Management (Pty) Limited

Tel: + 27 (0)11 301 0000
Fax: Corporate +27 (0)11 301 0499
76 Maude Street, Corner West Street, Sandton, South Africa
Private Bag X34, Benmore, 2010, South Africa

RESEARCH OPERATIONS COMMITTEE FINAL APPROVAL OF RESEARCH

Approval number: UNIV-2017-0020

Ms Rachel Zaidman

E mail: rachelventer@mweb.co.za

Dear Ms Zaidman

RE: MOTHER-INFANT ATTACHMENT IN THE SOUTH AFRICAN CONTEXT: A PARENTING PROGRAMME

The above-mentioned research was reviewed by the Research Operations Committee's delegated members and it is with pleasure that we inform you that your application to conduct this research at Netcare Park Lane Hospital, has been approved, subject to the following:

i) Research may now commence with this FINAL APPROVAL from the Netcare Research Operations Committee.

ii) All information regarding Netcare will be treated as legally privileged and confidential.

iii) Netcare's name will not be mentioned without written consent from the Netcare Research Operations Committee.

iv) All legal requirements regarding patient / participant's rights and confidentiality will be complied with.

v) The research will be conducted in compliance with the GUIDELINES FOR GOOD PRACTICE IN THE CONDUCT OF CLINICAL TRIALS IN HUMAN PARTICIPANTS IN SOUTH AFRICA (2006)

vi) Netcare must be furnished with a STATUS REPORT on the progress of the study at least annually on 30th September irrespective of the date of approval from the Netcare Research Operations Committee as well as a FINAL REPORT with reference to intention to publish and probable journals for publication, on completion of the study.

Executive Directors: R H Friedland, K N Gibson
Company Secretary: L Bagwandeen
Reg. No. 1992/002177/07

vii) A copy of the research report will be provided to the Netcare Research Operations Committee once it is finally approved by the relevant primary party or tertiary institution, or once complete or if discontinued for any reason whatsoever prior to the expected completion date.

viii) Netcare has the right to implement any recommendations from the research.

ix) Netcare reserves the right to withdraw the approval for research at any time during the process, should the research prove to be detrimental to the subjects/Netcare or should the researcher not comply with the conditions of approval.

x) APPROVAL IS VALID FOR A PERIOD OF 36 MONTHS FROM DATE OF THIS LETTER OR COMPLETION OR DISCONTINUATION OF THE TRIAL, WHICHEVER IS THE FIRST.

We wish you success in your research.

Yours faithfully

7/5/17

Prof Dion du Plessis
Full member: Netcare Research Operations Committee & Medical Practitioner evaluating research applications as per Management and Governance Policy

Shannon Nell
Chairperson: Netcare Research Operations Committee
Netcare Hospitals (Pty) Ltd
Date: 25/5/2017

RESEARCH OPERATIONS COMMITTEE FINAL APPROVAL OF RESEARCH

Approval number: UNIV-2017-0020

Ms Rachel Zaidman

E mail: rachelventer@mweb.co.za

Dear Ms Zaidman

RE: MOTHER-INFANT ATTACHMENT IN THE SOUTH AFRICAN CONTEXT: A PARENTING PROGRAMME

The above-mentioned research was reviewed by the Research Operations Committee's delegated members and it is with pleasure that we inform you that your application to conduct this research at private Hospital, has been approved, subject to the following:

i) Research may now commence with this FINAL APPROVAL from the Committee.

ii) All information regarding the Company will be treated as legally privileged and confidential.

iii) The Company's name will not be mentioned without written consent from the Committee.

iv) All legal requirements regarding patient / participant's rights and confidentiality will be complied with.

v) The research will be conducted in compliance with the GUIDELINES FOR GOOD PRACTICE IN THE CONDUCT OF CLINICAL TRIALS IN HUMAN PARTICIPANTS IN SOUTH AFRICA (2006)

vi) The Company must be furnished with a STATUS REPORT on the progress of the study at least annually on 30th September irrespective of the date of approval from the Committee as well as a FINAL REPORT with reference to intention to publish and probable journals for publication, on completion of the study.

vii) A copy of the research report will be provided to the Committee once it is finally approved by the relevant primary party or tertiary institution, or once complete or if discontinued for any reason whatsoever prior to the expected completion date.

viii) The Company has the right to implement any recommendations from the research.

ix) The Company reserves the right to withdraw the approval for research at any time during the process, should the research prove to be detrimental to the subjects/ Company or should the researcher not comply with the conditions of approval.

x) APPROVAL IS VALID FOR A PERIOD OF 36 MONTHS FROM DATE OF THIS LETTER OR COMPLETION OR DISCONTINUATION OF THE TRIAL, WHICHEVER IS THE FIRST.

We wish you success in your research.

Yours faithfully

4/5/17

Prof Dion du Plessis
Full member: Research Operations Committee & Medical Practitioner evaluating research applications as per Management and Governance Policy

Shannon Nell
Chairperson: Research Operations Committee
Date:

This letter has been anonymised to ensure confidentiality in the research report. The original letter is available with author of research

Netcare Hospital Management (Pty) Limited

Tel: + 27 (0)11 301 0000
Fax: Corporate +27 (0)11 301 0499
76 Maude Street, Corner West Street, Sandton, South Africa
Private Bag X34, Benmore, 2010, South Africa

RESEARCH OPERATIONS COMMITTEE FINAL APPROVAL OF RESEARCH

Approval number: UNIV-2017-0020b

Ms Rachel Zaidman

E mail: rachelventer@mweb.co.za

Dear Ms Zaidman

RE: MOTHER-INFANT ATTACHMENT IN THE SOUTH AFRICAN CONTEXT: A PARENTING PROGRAMME

The above-mentioned research was reviewed by the Research Operations Committee's delegated members and it is with pleasure that we inform you that your application to conduct this research at Netcare Olivedale Hospital, has been approved, subject to the following:

i) Research may now commence with this FINAL APPROVAL from the Netcare Research Operations Committee.

ii) All information regarding Netcare will be treated as legally privileged and confidential.

iii) Netcare's name will not be mentioned without written consent from the Netcare Research Operations Committee.

iv) All legal requirements regarding patient / participant's rights and confidentiality will be complied with.

v) The research will be conducted in compliance with the GUIDELINES FOR GOOD PRACTICE IN THE CONDUCT OF CLINICAL TRIALS IN HUMAN PARTICIPANTS IN SOUTH AFRICA (2006)

vi) Netcare must be furnished with a STATUS REPORT on the progress of the study at least annually on 30th September irrespective of the date of approval from the Netcare Research Operations Committee as well as a FINAL REPORT with reference to intention to publish and probable journals for publication, on completion of the study.

Executive Directors: R H Friedland, K N Gibson

Company Secretary: L Bagwandeen

Reg. No. 1992/002177/07

vii) A copy of the research report will be provided to the Netcare Research Operations Committee once it is finally approved by the relevant primary party or tertiary institution, or once complete or if discontinued for any reason whatsoever prior to the expected completion date.

viii) Netcare has the right to implement any recommendations from the research.

ix) Netcare reserves the right to withdraw the approval for research at any time during the process, should the research prove to be detrimental to the subjects/Netcare or should the researcher not comply with the conditions of approval.

x) APPROVAL IS VALID FOR A PERIOD OF 36 MONTHS FROM DATE OF THIS LETTER OR COMPLETION OR DISCONTINUATION OF THE TRIAL, WHICHEVER IS THE FIRST.

We wish you success in your research.

Yours faithfully,

Dr CW Fölscher
Full member: Netcare Research Operations Committee valuating research applications as per Management and Governance Policy

Shannon Nell
Chairperson: Netcare Research Operations Committee
Netcare Hospitals (Pty) Ltd
Date: 10/7/2017

APPENDIX B

Interview schedule - Biological Mothers

(Phase 1)

Researcher: **Ms Rachel Zaidman**
Degree: **DPhil (Social Work)**
Contact details: **072 561 2925**

INTERVIEW SCHEDULE: BIOLOGICAL MOTHERS

Biographical details

Name: …….

Age: ……years

Biological children: Number: ……

Ages: ……

Occupation: …….

Racial group: Black ☐ White ☐ Coloured ☐ Indian ☐

Other ☐ (Specify) ……..

Cultural affiliation: ……

Place of residence: ……

(Urban ☐ / Semi-rural ☐ / Rural ☐)

Childhood residence: ……..

(Urban ☐ / Semi-rural ☐ / Rural ☐)

I am interested in finding more about the role of culture on the bond between a mother and her baby and would like to find out how it is seen in different cultures.

I would appreciate to get your opinion on the matter.

Please know that there are no right or wrong answers.

QUESTIONS

1) What cultural group do you belong to and in what culture are your children raised?
2) In your culture, who is the person that takes the main responsibility to care for a baby?
3) Does your culture have any guidelines on how mothers/caregivers should respond to babies (e.g. talking to the baby, picking the baby up, playing with the baby)? If yes, please describe.
4) Do you know of other cultures that have such guidelines for how mothers/caregivers should respond to babies? If yes, please describe.
5) In your view, how do you think a mother or caregiver should respond in the following situations?
    - When a baby cries
    - When a baby wants to be picked up
    - When a baby 'talks' with the mother or caregiver
    - When a baby wants to play with the mother/caregiver
    - When a baby clings to the mother
    - When a baby cries when the mother leaves him/her?
6) In your culture, what will be regarded as 'taking good care' of a baby?
    - To your knowledge, how is it similar to or different from the views of 'good care' in other cultures?
7) How important is it in your culture that a baby should form a special bond with his/her mother?

Thank you very much for participating in this interview.

APPENDIX C

Interview schedule - Helping professionals

(Phase 1)

Researcher: **Ms Rachel Zaidman**
Degree: **DPhil (Social Work)**
Contact details: **072 561 2925**

INTERVIEW SCHEDULE: HELPING PROFESSIONS

(Expert in field of attachment ☐ / Professional in helping professions ☐)

Biographical details

Name: …….

Age: ……years

Sex: Male ☐ / Female ☐

Profession: …….

Scope of practice: …….
Family / child welfare / assessment, etc.

Field of specialisation: …….. / n/a ☐

Years experience in the field: ……years

Racial group: Black ☐ White ☐ Coloured ☐ Indian ☐

Other ☐ (Specify) ……..

Cultural affiliation: ……

QUESTIONS

1) What racial and cultural groups do you work with in your practice?
2) To what extent is your work related to mother-infant attachment?
3) What type of direct or indirect services do you deliver related to mother-infant attachment?
4) In your experience, how does culture impact on mother-infant attachment? Please provide examples.
5) Does your own culture have any guidelines on how mothers/caregivers should respond to babies (e.g. talking to the baby, picking the baby up, playing with the baby)? If yes, please describe.
6) Do you know of other cultures in South Africa that have such guidelines on how mothers/caregivers should respond to babies? If yes, please describe.
7) In your opinion, how does culture influence the attachment behaviour of attachment figures and their infants in South Africa?
8) How would you say the different population groups in South Africa perceive an attuned attachment between mother and infant?
9) Would you say this perception is different to Western populations?
10) In your opinion, what behavioural variables between attachment figures and infants should be used to measure levels of attachment on a scale developed in a South African context?
11) In your opinion, what cultural aspects should be focused on in a South African attachment-based parenting programme with adult mothers and their infant children?

Thank you very much for your participation in this interview.

APPENDIX D

Interview Schedule – Mothers in Mother-infant Dyads

(Phase 2)

Researcher: **Ms Rachel Zaidman**
Degree: **DPhil (Social Work)**
Contact details: **072 561 2925**

INTERVIEW SCHEDULE: MOTHERS IN MOTHER-INFANT DYADS

Biographical details

Name: …….

Age (mother): ……years

Age (infant): …….months

Other biological children: Number: ……

Ages: ……

Occupation: …….

Racial group: Black ☐ White ☐ Coloured ☐ Indian ☐

Other ☐ (Specify) ……..

Cultural affiliation: ……

Place of residence: ……

(Urban ☐ / Semi-rural ☐ / Rural ☐)

Childhood residence: …….

(Urban ☐ / Semi-rural ☐ / Rural ☐)

Thank you for your willingness to participate in the parenting programme.

I am interested in how the mothers experienced the programme and will appreciate your opinion.

Please know that there are no right or wrong answers.

QUESTIONS

8) What cultural group do you belong to and in accordance with what culture are your children raised?

9) In your culture, who is the person(s) that takes the main responsibility to care for a baby?

10) What is your opinion on the guidelines for the care of your baby that was presented in the programme?

11) How do these guidelines compare to your previous perceptions on infant care?

12) Does your own culture have any guidelines on how mothers/caregivers should respond to babies (e.g. talking to the baby, picking the baby up, playing with the baby)? If yes, please describe.

    Are any of these guidelines different to the guidelines presented in the programme that you attended? If yes, please describe.

13) Do you know of other cultures that have guidelines for how mothers/caregivers should respond to babies? If yes, please describe.

    Are any of these guidelines different to the guidelines presented in the programme that you attended? If yes, please describe.

14) What recommendations do you have in terms of the content of the programme (e.g. information, specific sections of information)?

15) What recommendations do you have in terms of the presentation of the programme (e.g. duration, time, activities)?

16) Did the programme influence your perception of the attachment bond between a mother and her infant child? Please describe.

Thank you for participation in the programme and in the interview.

APPENDIX E

Ethical Approval – University of Pretoria

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Research Ethics Committee

10 August 2017

Dear Ms Zaidman

Project:	**Mother-infant attachment in the South African context: a parenting programme**
Researcher:	**R Zaidman**
Supervisor:	**Drs MP le Roux and H Hall**
Department:	**Social Work and Criminology**
Reference number:	**15410847 (GW20170335HS) Amendment to protocol**

Thank you for the application to amend the existing protocol that was approved by the Committee on 21 April 2017.

I have pleasure in informing you that the amendment was **approved** the Research Ethics Committee at an *ad hoc* meeting held on 18 August 2017. Further data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should your actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

The Committee requests you to convey this approval to the researcher.

We wish you success with the project.

Sincerely

Prof Maxi Schoeman
Deputy Dean: Postgraduate and Research Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: tracey.andrew@up.ac.za

CC: Dr MP le Roux (Upervisor)
Dr H Hall (Supervisor)
Prof A Lombard (HoD)

Research Ethics Committee Members: Prof MWE Schoeman (Deputy Dean); Prof KL Harris; Dr L Blokland; Ms A dos Santos; Dr R Cassim; Ms KT Govinden; Dr E Johnson; Dr C Pienaar; Dr C Puttergill; Dr D Reyburn; Dr M Taub; Prof GM Spies; Prof E Taljard; Ms B Tsebe; Dr E van der Klashorst; Dr G Wolmarans; Ms O Makalapa

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Research Ethics Committee

21 April 2017

Dear Ms Zaldman

Project:	**Mother-infant attachment in the South African context: a parenting programme**
Researchers:	**Ms R Zaldman**
Supervisors:	**Dre MP le Roux and H Hall**
Department:	**Social Work and Criminology**
Reference number:	**15410847 (GW20170335HS)**

Thank you for your response to the Committee's letter of 4 April 2017.

The **Research Ethics Committee** notes that the outstanding permission from the *Netcare Park Lane Hospital* was submitted as requested. The research project was therefore given **final approval** at an *ad hoc* meeting on 21 April 2017. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should the actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely

Prof Maxi Schoeman
Deputy Dean: Postgraduate and Research Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: tracey.andrew@up.ac.za

CC: Dr MP le Roux (Supervisor)
Dr H Hall (Co-supervisor)
Prof A Lombard (HoD)

Research Ethics Committee Members: Prof MME Schoeman (Deputy Dean); Prof KL Harris; Dr L Blokland; Ms A du Plessis; Dr R Fasselt; Ms K Govinden; Dr E Jelsma; Dr C De la Harpe; Dr C Puttergill; Dr D Reyburn; Dr W Tsuma; Prof CV Spies; Prof E Taljard; Ms B Taylor; Dr E van der Riet-Nel; Dr C Wolmarans; Ms D Mokgalane

APPENDIX F

Informed consent – Helping Professionals

(Phase 1)

Researcher: **Ms Rachel Zaidman**

Degree: **DPhil (Social Work)**

Contact details: **072 561 2925**

INFORMED CONSENT: HELPING PROFESSIONS

Name of participant: _____

1. Title of the study

Mother-infant attachment in the South African context: a parenting programme.

2. Purpose of the study

The purpose of this study is to develop, implement and evaluate a parenting programme to enhance mother-infant attachment within the South African socio-cultural context.

3. Procedures

I will be asked to take part in a personal interview with the researcher, Ms Rachel Zaidman. The interview will focus on information that can shed light on whether and how culture has an influence on mother-infant attachment. The information will enable the researcher to develop an attachment-based parenting programme for South African mothers and infants. The interview will last approximately 40 to 60 minutes and will be audio-recorded. All the information will be handled confidentially and only Ms Zaidman and her supervisors at the University of Pretoria will have access to it.

4. Possible risks

The interviews will focus on my views on the research topic, thus there are no risks foreseen in my participation in the research. However, if I experience any emotional distress due to the interview, Ms Zaidman will refer me to a registered social worker who can arrange for counselling.

5. Benefits of participation

I will not receive any compensation for participating in the study. However, depending on the information gained during the interviews, the researcher plans to develop a parenting programme for enhancing mother-infant attachment that will take cultural factors into account. My participation can thus provide valuable information that can benefit mothers and their infant children.

6. Rights as a participant

I am aware that my participation is voluntary. I have the right to withdraw from the research at any time, without any negative consequences for me.

7. Confidentiality

The recordings of the interviews will be transcribed in a word document. My name and other identifying details will not appear on these documents and the information that I provide will be handled with strict confidentiality. Digital recordings will be stored electronically and the transcripts from the interviews will be secured in a locked cabinet. Only the researcher and her supervisors at the university will have access to the research data. After completion of the research all the data will be safely stored at the Department of Social Work and Criminology, University of Pretoria, for a period of 15 years. The results of this research will be presented in a research report and may appear in professional publications, be presented at professional conferences or utilised for future research purposes. However, my privacy will be respected and I will not be identifiable. If the information would be used for further research, the same measures to protect my confidentiality will apply.

8. Contact details

If I need more information about this research, I can contact the researcher at her e-mail (rachelventer@mweb.co.za) or on her cell number (072 561 2925).

9. Permission for participation in the research study

I, the undersigned, understand the information provided above and all my questions have been answered satisfactorily. I understand what the research is about and why it is being done. I also know that the research information will be stored for 15 years at the Department of Social Work and Criminology, University of Pretoria, as stipulated in their policy.

I understand my rights as a participant and give my permission to voluntarily participate in the research study.

I have received a copy of this letter.

Participant: _____ Date: _____

Researcher: _____ Date: _____

APPENDIX G

Informed consent – Biological Mothers

(Phase 1)

Researcher: **Ms Rachel Zaidman**

Degree: **DPhil (Social Work)**

Contact details: **072 561 2925**

INFORMED CONSENT: BIOLOGICAL MOTHERS (INTERVIEWS: PHASE 1)

Name of participant: _____

1. Title of the study

Mother-infant attachment in the South African context: a parenting programme.

2. Purpose of the study

The purpose of the study is to develop, implement and evaluate a parenting programme to enhance mother-infant attachment within the South African socio-cultural context.

3. Procedures

I will be asked to take part in a personal interview with the researcher, Ms Rachel Zaidman. The interview will focus on information that can shed light on whether and how culture has an influence on the mother-infant attachment bond. The information will enable the researcher to develop an attachment-based parenting programme for South African mothers and infants. As South Africa is a country with many different cultural groups, this information can help social workers to better understand their work with mothers/caregivers from different cultural groups, who care for young children. The interview will last approximately 40 to 60 minutes and will be audio-recorded so that Ms Zaidman can gather the information accurately. All the information will be handled confidentially and only Ms Zaidman and her supervisors at the University of Pretoria will have access to it.

4. Possible risks

Ms Zaidman is interested in my views on the possible influence of culture on mother-infant attachment. The interviews will focus on mothers/caregivers in general and not on my personal situation. Ms Zaidman needs information from mothers from different cultural groups, hence there are no right or wrong answers. After the interview, Ms Zaidman will make sure that I do not have any misunderstandings about the interview. Therefore, there are no risks foreseen in my participation in the research. However, if experience emotional distress due to the interview, Ms Zaidman will refer me to a registered social worker who can arrange for counselling.

5. Benefits of participation

I will not receive any compensation for participating in the study. However, the researcher plans to develop a parenting programme that will focus on enhancing the attachment bond between mothers and infants, taking their culture into account. My participation can thus provide valuable information that can benefit mothers and their infant children.

6. Rights as a participant

I am aware that I am under no obligation to participate, and that my participation is voluntary. If I choose to withdraw from the study, I will be allowed to do so at any time without any negative consequences.

7. Confidentiality

The recordings of the interviews will be transcribed in a word document. My name and other identifying details will not appear on these documents and the information that I will provide will be handled with strict confidentiality. The recordings will be stored electronically and the transcripts from the interviews will be secured in a locked cabinet. Only the researcher and her supervisors at the university will have access to the research data. After completion of the research all the research information will be safely stored at the Department of Social Work and Criminology, University of Pretoria, for a period of 15 years. The results of this research will be published in a research report and may appear in professional publications, be presented at professional conferences or used for future research purposes. However, my privacy will be respected and I will not be identifiable. If the information would be used for further research, the same measures to protect my confidentiality will apply.

8. Contact details

If I need more information about this research, I can contact the researcher at her e-mail (rachelventer@mweb.co.za) or on her cell number (072 561 2925).

9. Permission for participation in the research study

I, the undersigned, understand the information provided above and all my questions have been answered satisfactorily. I understand what the research is about and why it is being done. I also know that the research information will be stored for 15 years at the Department of Social Work and Criminology, University of Pretoria, as stipulated in their policy

I understand my rights as a participant and give permission to voluntarily participate in the research study.

I have received a copy of this letter.

Participant: _____ Date: _____

Researcher: _____ Date: _____

APPENDIX H

Informed consent – Mother-infant Dyad

(Experimental group – Phase 2)

Researcher: **Ms Rachel Zaidman**

Degree: **DPhil (Social Work)**

Contact details: **072 561 2925**

INFORMED CONSENT: MOTHER-INFANT DYADS – EXPERIMENTAL GROUP

Name of participant: _____

1. Title of the study

Mother-infant attachment in the South African context: a parenting programme.

2. Purpose of the study

The purpose of this study is to develop, implement and evaluate a parenting programme to enhance mother-infant attachment within the South African socio-cultural context.

3. Procedures

I will be asked to, together with my infant child, take part in this study that focuses on developing and evaluating a parenting programme for mother-infant attachment. Our participation in the research will involve the following:

- I will attend a parenting programme that the researcher developed. The programme will be presented by the researcher to a small group of mothers over four sessions that will be conducted on four consecutive Saturday mornings. Each session will last approximately one hour. The programme will contain information on enhancing the attachment bond between mothers and infants, taking cultural contexts into account. The mothers will attend the programme without their infants being present.
- After the completion of the programme, Ms Zaidman will conduct a personal interview with me to explore my experience of the programme. This interview will last about 30 minutes and will be audio-recorded so that information is gathered accurately.
- I will be requested to participate in two play sessions with my infant child, each lasting about 10 minutes. One play session will be conducted before I attend the parenting programme and one after completion of the programme. These two play sessions will be video-recorded to enable Ms Zaidman to observe the interaction between myself and my child before and after attending the programme. This form of observation is commonly used in studies that focus on mother-infant interaction. Ms Zaidman will provide the play materials for the play sessions and arrange a safe and convenient venue at a time that

will fit in with my and my infant's schedule. At the completion of the two play sessions, Ms Zaidman will provide me with feedback on the sessions.

All the information obtained through the video recordings and the personal interview with me, will be handled confidentially. Participation in the research is voluntary and I can withdraw from the study at any time, without any negative consequences.

4. Possible risks

The programme developed by Ms Zaidman is intended to enhance mother-infant attachment and can contribute to a positive bond between me and my infant child. The interview conducted to programme will focus on my experience of the programme and recommendations to Ms Zaidman. The observation of mother-infant play sessions is a commonly used method that involves little risk of harm, and the play sessions will be in accordance with accepted procedures such as safety, privacy and a brief duration. During the play sessions, the well-being of me and my infant child will be of prime importance. Limited risk is thus foreseen in our participation in the research. If I am of the opinion that the play sessions cause distress for me or my child, I can stop the session immediately, without any negative consequences for either of us. If I experience emotional distress because of participation in the research, Ms Zaidman will refer me to a registered social worker for counselling.

5. Benefits of participation

I will not receive any compensation for participating in the study. However, my participation in the programme and the feedback on the two play sessions can benefit my attachment with my infant child. My participation in the research could also provide valuable information that can benefit other mothers and their infant children.

6. Rights as a participant

I am aware that I am under no obligation to participate in the study, and I can voluntarily decide whether I will participate in the research together with my infant child. If I choose to withdraw from the research, I can do so at any time without any negative consequences.

7. Confidentiality

The video recordings of the play sessions will be handled with strict confidentiality and will only be accessible to Ms Zaidman, a co-observer who will help her with the analysis of the content, and the research supervisors. The co-observer will be a registered social worker or psychologist and will sign an agreement of confidentiality. The audio recordings of the interview with Ms Zaidman will be transcribed in a word document. My name and other identifying details will not appear on these documents and the information will be handled

with strict confidentiality. Only the researcher and her supervisors at the university will have access to the audio recordings.

The audio and video recordings will be stored electronically, and the transcripts from the interviews will be secured in a locked cabinet. After completion of the research all the research information will be safely stored at the Department of Social Work and Criminology, University of Pretoria, for a period of 15 years. The results of this research will be published in a research report and may appear in professional publications, be presented at professional conferences or utilised for future research purposes. However, my privacy and my infant's privacy will be respected and we will not be identifiable. If the information would be used for further research, the same measures to protect our confidentiality will apply.

8. Contact details

If I need more information about this research, I can contact the researcher at her e-mail (rachelventer@mweb.co.za) or on her cell number (072 561 2925).

9. Permission for participation in the research study

I, the undersigned, understand the information provided above and all my questions have been answered satisfactorily. I understand what the research is about and why it is being done. I also know that the research information will be stored for 15 years at the Department of Social Work and Criminology, University of Pretoria, as stipulated in their policy.

I understand my rights as a participant and the rights of my child, and give permission to voluntarily participate in the research study.

I have received a copy of this letter.

Participant: _____ Date: _____

Researcher: _____ Date: _____

APPENDIX I

Informed consent – Mother-infant Dyad

(Comparison group – Phase 2)

Researcher: **Ms Rachel Zaidman**

Degree: **DPhil (Social Work)**

Contact details: **072 561 2925**

INFORMED CONSENT: MOTHER-INFANT DYADS – COMPARISON GROUP

Name of participant: _____

1. Title of the study

Mother-infant attachment in the South African context: a parenting programme.

2. Purpose of the study

The purpose of this study is to develop, implement and evaluate a parenting programme to enhance mother-infant attachment within the South African socio-cultural context.

3. Procedures

I will be asked to, together with my infant, take part in this study that focuses on developing and evaluating a parenting programme for mother-infant attachment. Our participation in the research will involve the following:

- I will be requested to participate in two play sessions with my infant child, each lasting about 10 minutes. The second session will occur approximately four weeks after the first one. The two play sessions will be video-recorded to enable Ms Zaidman to observe the interaction between myself and my child. This form of observation is commonly used in studies that focus on mother-infant interaction. Ms Zaidman will provide the play materials for the play sessions and arrange a safe and convenient venue at a time that will fit in with my and my infant's schedule.
- Ms Zaidman will provide me with feedback on the play sessions after the second session. I will then be invited to attend an attachment-based parenting programme that was developed by the researcher. The programme will be presented to a small group of mothers in four sessions that will be conducted on four consecutive Saturday mornings. Each session will last approximately one hour. The programme will contain information on enhancing the attachment bond between mothers and infants, taking cultural contexts into account. The mothers will attend the programme without their infants being present.

All the information obtained through the video recordings, will be handled confidentially. Participation in the research is voluntary and I can withdraw from the study at any time, without any negative consequences.

4. Possible risks

The programme developed by Ms Zaidman is intended to enhance mother-infant attachment and can contribute to a positive bond between me and my infant child. The observation of mother-infant play sessions is a commonly used method that involves little risk of harm, and the play sessions will be in accordance with accepted procedures such as safety, privacy and a brief duration. During the play sessions, the well-being of me and my infant child will be of prime importance. Limited risk is thus foreseen in our participation in the research. If I am of the opinion that the play sessions cause distress for me or my child, I can stop the session immediately, without any negative consequences for either of us. If I experience emotional distress because of participation in the research, Ms Zaidman will refer me to a registered social worker for counselling.

5. Benefits of participation

I will not receive any compensation for participating in the study. However, the feedback from the researcher on the play sessions and my attendance of the programme can benefit my attachment with my infant child. My participation in the research could also provide valuable information that can benefit other mothers and their infant children.

6. Rights as a participant

I am aware that I am under no obligation to participate in the study, and I can voluntarily decide whether I will participate in the research together with my infant child. If I choose to withdraw from the research, I can do so at any time without any negative consequences.

7. Confidentiality

The video recordings of the play sessions will be handled with strict confidentiality and will only be accessible to Ms Zaidman, a co-observer who will help her with the analysis of the content, and the research supervisors. The co-observer will sign an agreement of confidentiality. The video recordings will be stored electronically. After completion of the research all the research information will be safely stored at the Department of Social Work and Criminology, University of Pretoria, for a period of 15 years. The results of this research will be published in a research report and may appear in professional publications, be presented at professional conferences or utilised for future research purposes. However, my privacy and my infant's privacy will be respected and we will not be identifiable. If the

information would be used for further research, the same measures to protect our confidentiality will apply.

8. Contact details

If I need more information about this research, I can contact the researcher at her e-mail (rachelventer@mweb.co.za) or on her cell number (072 561 2925).

9. Permission for participation in the research study

I, the undersigned, understand the information provided above and all my questions have been answered satisfactorily. I understand what the research is about and why it is being done. I also know that the research information will be stored for 15 years at the Department of Social Work and Criminology, University of Pretoria, as stipulated in their policy.

I understand my rights as a participant and the rights of my child, and give permission to voluntarily participate in the research study.

I have received a copy of this letter.

Participant: _____ Date: _____

Researcher: _____ Date: _____

APPENDIX J

Confidentiality Agreement

University of Pretoria
Faculty of Humanities
Department of Social Work &
Criminology

Researcher: **Rachel Zaidman-Mograbi**
Tel: (011) 793-7140 or 072 561 2925
E-mail: rachelmograbi@mweb.co.za

Confidentiality Agreement

Jeani Coetzee

Name of independent observer

In consideration of my participation in the research study conducted by Mrs Rachel Zaidman-Mograbi in my capacity as an independent observer, I acknowledge and agree that:

- **I shall keep all information strictly confidential**
- **I shall not disclose the identifying details of the participants**
- **I shall not disclose the findings to any person**
- **I shall deliver all the records or material of any nature relating to the study to the researcher and**
- **I acknowledge that the disclosure of any confidential information is against ethical principles and is prohibited.**

This agreement is binding to me and my conscience and shall be strictly adhered to.

Signature .....

Date 2018 - 04 - 04