Resilience of young adults in a context of drought

by

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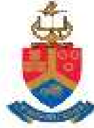
DECLARATION OF OWN WORK

I, Netsai Gwata (student number 16246005), declare that this mini-dissertation titled: *The resilience of young adults in a context of drought*, which I hereby submit for the degree Magister Educationis in Educational Psychology at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Netsai Gwata
14 March 2018



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- Informed consent/assent,
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ETHICS STATEMENT

The author, whose name appears on the title page of this thesis, has obtained, for the research described in this work, the applicable research ethics approval. The author declares that he/she has observed the ethical standards required in terms of the University of Pretoria's *Code of ethics for researchers and the Policy guidelines for responsible research."*

ABSTRACT

THE RISILIENCE OF YOUNG ADULTS IN A CONTEXT OF DROUHGT

Supervisor: Prof L. Theron
Department: Educational Psychology
Degree: MEd (Educational Psychology)

The purpose of this phenomenological study was to explore the factors that enable the resilience of young adults who experienced drought in Leandra. Against the background of ongoing global warming, it is important to understand what enables the resilience of young adults in a context of drought so that pathways for drought-resilient livelihoods may be created for these young people. In order to achieve this purpose, I took an interpretivist stance as it supports an inductive qualitative inquiry that is suitable for gaining an understanding of the experiences and perceptions of young adults in a context of drought. I adopted a phenomenological research design to ensure that my research questions are answered. Purposive sampling was used to select the participants of the study. Ten young adults (five women and five men) aged between 20 and 24 years from Leandra in the Govan Mbeki district of Mpumalanga were selected. Arts-based activities (draw-and-write, body-mapping and "sand-tray" work) were used in groups to generate data. A thematic data analysis was done to identify the themes that emerged from the data. The themes relating to aspects of drought that young adults found difficult to deal with were: unmet basic needs (lack of water and lack of food); economic hardship (expensive products and job loss) and compromised hygiene. I used Ungar's (2011) Social Ecology of Resilience Theory (SERT) to frame my study and found that the resilience-enabling themes that emerged, aligned with his theory. In the individual system, themes that emerged were: having positive personal characteristics (optimism and altruism); having a religious engagement; keeping busy to stress less; and exercising agency and water-use habits. In the family system the emerging theme was protective parenting, while in the community system it was initiatives to solve drought-related challenges (formal pragmatic initiatives and community connectedness). From these themes, it can be concluded that educational psychologists who counsel drought-challenged young adults in Leandra need to work from an eco-systemic perspective and include people like parents and municipal staff in programmes or initiatives that enable resilience for young adults.

Key words: drought; qualitative; resilience; resilience enablers; risks; young adults

DECLARATION

I herewith declare that I,

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION AND RATIONALE OF THE STUDY

Every transition in life is characterised by developmental milestones. The transition from adolescence to young adulthood is no exception. Cohen, Kasen, Chen, Hartmark and Gordon (2003), cited the developmental tasks for young adulthood as the establishment of a stable residence, completion of school, selection of a career, training, as well as marriage or long-term commitment with a romantic partner. These developmental transitions are usually influenced by culture and experienced in different ways (Cohen et al., 2003; Roisman, Masten, Coatsworth & Telgen, 2004). Young adults also experience different risks and challenges in their lives, which affect how and when they achieve developmental milestones. Ungar (2015) furthermore points out that adversity is an important aspect when identifying resilience in young people. According to Nduna and Jewkes (2012), young people from South Africa face different kinds of adversity, which cause distress – severe poverty, HIV/AIDS, parental absence, large dysfunctional families, lack of access to basic resources and violence, to mention a few. Despite many studies that focus on the resilience of South African youths in the contexts cited by Nduna and Jewkes (2012), very few studies focus on the resilience of young adults in a context of drought (Myeyiwa, Masset, Ngubane, Letsekha & Rozani, 2014).

Drought is one of the deadliest risks as far as natural disasters are concerned, as it has a major effect on ecosystems, people's livelihoods and the socio-economic development of a country (Singh & Chudasama, 2017). With regard to the ongoing global warming, it is important to understand what enables or hampers the resilience of young adults in a context of drought so as to create pathways for drought-resilient livelihoods for these young people. According to Reber, Allen and Reber (2009, p. 681), resilience is "the capacity to maintain effective psychological and behavioural adjustment in the face of factors that normally put individuals at risk for poor adjustment". Ungar (2008, p. 225) mentions ability to "navigate" towards resources and "negotiate" for resources so that they are "provided and *experienced* in culturally meaningful ways". In this study, resilience refers to young adults' ability to utilise individual, family, community and macro-systems' resilience-enabling resources to adapt positively, as well as to the ability of the social ecology to provide resources that are meaningful for young adults in the context of drought. Theron and Theron (2010), argue that communities and professionals who work with

young people need to understand, be committed to and assist the young people in sustaining resilience.

As mentioned earlier, in contrast to a wide array of resilience literature on South African youth (adolescents and young adults), there is only scant literature available on the resilience of young adults in a context of drought. For this reason, my study explores this matter in depth. As it happened, I was invited to take part in a project called "Pattern of resilience among young people in a community affected by drought: Historical and contextual perspectives" and I worked as a co-researcher with seven other first-year students in the MEd (Educational Psychology) class. The principal investigators included professors from the University of Pretoria and University of Brighton in the United Kingdom. Other stakeholders in the project included co-researchers from the University of Brighton; Boing Boing (a Non-Governmental Organisation from the UK that focuses on the resilience of young people in a disadvantaged community); research assistants (honours students from the University of Pretoria); Khulisa Social Solutions (a community partner from Leandra, a town in the Mpumalanga province of South Africa); adolescents and young adults from Leandra (who were research participants as well as co-researchers when they had to interview elders from their community); and elders from the community of Leandra.

1.2 PROBLEM STATEMENT

Numerous and varied South African resilience studies have focused on a variety of threats that challenge the well-being of young people today. These threats include HIV/AIDS (Cluver, Orkin, Meinck, Boyes & Sherr, 2016; Collishaw, Gardner, Aber & Cluver, 2015; Ebersöhn et al., 2015, 2015; Lethale & Pillay, 2013); divorce and remarriage (Ebersöhn & Bouwer, 2013); intellectual disability (Hall & Theron, 2016); mental health problems (Havenaar, Geerlings, Vivian, Collinson & Robertson, 2008); streetism (Hills, Meyer-Weitz & Asante, 2016; Malindi, 2014; Malindi & Machenjedze, 2012; Malindi & Theron, 2010; Theron & Malindi 2010); violence (Hlatshwayo & Vally, 2014); abuse (Meinck, Cluver, Boyes & Ndhlovu, 2015); living in institutions (Mohangi, Ebersohn & Eloff, 2011); climate change (Myeyiwa et al., 2014); alcohol use (Onya, Tessera, Myers & Flisher, 2012) and care leaving (van Breda, 2017). As can be seen, the studies do not focus on drought as a risk, except for Myeyiwa and colleagues (2014), who focus on the resilience of women (both young and old) during climate change. It is important to understand resilience in this specific context because resilience is considered a context-sensitive process (Vanderbilt-Adriance & Shaw, 2008). Since it is also a developmentally sensitive process (Masten, 2001), it would be unwise to merely generalise what is already known about resilience in other contexts

(e.g., the context of a dysfunctional family) to the context of drought, without first learning from young adults (women and men) themselves who have first-hand experience of drought.

1.3 PURPOSE OF THE STUDY

The purpose of this phenomenological study was to explore the factors that enable the resilience of young adults who have experienced drought in Leandra. The study also sought to understand how these young adults comprehend and explain their resilience in a context of drought.

1.4 RESEARCH QUESTIONS

1.4.1 Primary research question

- *How do young adults from Leandra explain their resilience in the context of drought?*

1.4.2 Sub-questions

- *Which aspects of drought do young adults from Leandra find difficult to deal with?*
- *What supports the resilience of young adults from Leandra?*

1.5 THEORETICAL FRAMEWORK: SOCIAL ECOLOGY OF RESILIENCE THEORY

I used the Social Ecology of Resilience Theory (SERT) (Ungar, 2011) as the theoretical framework for my study. According to Hall and Theron (2016), the SERT emphasises the collaborative nature of resilience. Although earlier research on resilience focused on the individual, Ungar (2011, p.1), argues that this focus rather needs to be shifted towards resilience as "a quality of the child's social and physical ecology". To elaborate on the social ecological understanding of resilience, Ungar (2011), proposes four principles of resilience: decentrality, complexity, atypicality and cultural relativity. Theron (2015), argues that in the SERT, though personal resources are not discounted, the emphasis is on relational (i.e. familial relationships) and environmental (i.e. social justice processes) resources. This is what Ungar (2011), explains as decentralising the child.

While explaining complexity, Ungar (2011), notes that resilience is dynamic. This view is supported by Masten (2014), who highlights that resilience of an individual depends on the function of complex adaptive systems that are continually interacting and transforming. Ungar (2011), also links the principle of complexity in resilience to equifinality – the concept that similar outcomes stem from different experiences and developmental pathways (Mash & Wolfe, 2016). Thus, equifinality explains why different individuals use varied resources from different contexts

to adapt positively in the face of adversity. However, Collishaw et al. (2015), also talk of heterogeneity (multifinality) of outcomes (i.e. different levels of adaptation) in children who face the same risks and adversities. Within the SERT, resilience is not related merely to the availability of resources, but also to the initiative that young people show as they identify, recognise and mobilise these resources towards helpful engagement. Such processes take place when the individual interacts with his/her environment (Van Breda, 2017).

Malindi and Theron (2010), explain atypicality when they indicate how some individuals use non-traditional methods of resilience in the face of adversity. These authors warn that the community labels individuals who use controversial or dangerous adaptive responses as problematic. An example of atypicality in the context of drought might be a young woman who resorts to prostitution to feed her family.

Resilience is always relative to culture. This is the point that Ungar (2011), stresses when he explains cultural relativity. To support this, Theron et al. (2011), cite the concept of *ubuntu* in the South African context as facilitating resilience through the use of community support systems. In contrast, young people from a society that values autonomy and individualism would be less likely to draw on community support systems (Kumpulainen et al., 2016).

1.6 CONCEPT CLARIFICATION

1.6.1 Risk factors

An important aspect of resilience noted by resilience scholars is the presence of risk for a person to be identified as resilient (Ebersöhn, 2013; Masten, 2001; 2008; Rutter, 2013). Risk factors are factors that heighten one's vulnerability to adversity. According to Mampane and Bouwer (2011), risk factors have a negative impact on the competence and resilience of individuals. Masten (2001, p. 228), defines risk as "current or past hazards judged to have the potential to derail normative development" and further explains that problems in development occur together. Both Masten (2008; 2016), and Rutter (2013), talk about cumulative risk. For example, a child who is born with a mental challenge may also be neglected at home and bullied at school. Thus, to be resilient, the individual needs to adjust to multiple (typically simultaneous) challenges. In my study, drought constitutes the risk factor.

1.6.2 Drought

According to Botterill and Chapman (2002), there is no agreed definition of drought. They argue that various definitions point to meteorological (problematic weather conditions), hydrological (lack of rain), agricultural (low commodity production) and/or socio-economic (low incomes and social consequences) aspects. In my study, I have worked from the assumption that when there is drought, all the above aspects are brought together and can be identified in the area where there is drought. Ng, Wilson and Veitch (2015), who argue that drought puts young adults at risk, cite these risks as lack of employment opportunities (which often leads to suicide); chronic health conditions such as hypertension, cardiac disease and mental health; financial and emotional stress; anxiety; fear and loss; and others.

1.6.3 Resilience enablers

Resilience enablers are factors that protect people from maladaptive functioning when they encounter adversity. These resilience-enabling factors play an important role in alleviating risk and protecting the individual from impending risks in the environment (Mampane & Bouwer, 2011). According to Van Breda (2017), the enablers occur at individual (intrapersonal), family and community (intrapersonal) levels. On the individual level, resilience-enabling factors may include intelligence and executive functions, whilst on the intrapersonal level, protective factors can include caring relationships, cultural beliefs and religion (Masten, 2014).

1.6.4 Young adults

There is no consensus definition of and age range for the term 'young adult'. For the purpose of my study, it refers to participants in the study who were aged 20 to 24 years. I chose this age range as most young people in South Africa finish school at the age of 19 and at 20 years old they are expected to engage in post-secondary education or look for work – two important developmental milestones for young adulthood. Arnett (2000), coined the concept of emerging adulthood for the period 18 to 30 years of age. In respect of Western communities, Arnett noted that individuals in these age groups have left the dependency of childhood and adolescence but have not yet assumed the enduring responsibilities that are more normative in adulthood. Burt and Paysnick (2012), note that although the theory of emerging adulthood does not necessarily apply to all youth, it offers a useful broad perspective on the challenges and opportunities facing young people today.

1.7 ASSUMPTIONS

I made the following assumptions on which I based my study:

- Drought is a threat to the livelihood of young adults in rural areas.
- Visual and narrative methods can provide rich data to explore the resilience of young adults in a context of drought.
- Young adults utilise individual, familial, community and macro resources to enable them to resile in a context of drought.

1.8 METHODOLOGY

Chapter 3 describes the methodology used in my study in detail. What follows next, is a brief summary of the methodology.

1.8.1 Paradigmatic perspectives

1.8.2.1 Meta theoretical paradigm

Interpretivism is the meta-theoretical framework I chose for my study. According to Jansen (2007), individuals and communities assign meaning to their experiences in interpretivism. The reasons, advantages and disadvantages of employing interpretivism as a meta-theoretical paradigm are detailed in Chapter 3 (Section 3.3.1).

1.8.2.2 Methodological paradigm

The methodological paradigm used in my study is a qualitative one. As suggested by McMillan and Schumacher (2014), I needed to gain a deeper understanding of the resilience of young adults in the context of drought. To gain this deeper understanding, I had to conduct my study in a natural setting and prioritise the insights of young adults themselves. The advantages and disadvantages of utilising qualitative research as a methodological paradigm are explained in Chapter 3 (Section 3.3.2).

1.8.2 Methodology

1.8.2.1 Research design

In respect of a suitable research design for my study, I decided on a phenomenological research design in which phenomena emerge from the local context and those who experience them have the authority to say what they feel and do, and how they make meaning of the phenomena (Nieuwenhuis, 2007). The reasons why I chose a phenomenological research design and its advantages as well as disadvantages are detailed in Chapter 3 (Section 3.4.1).

1.8.2.2 Sampling/Participants

Purposive sampling, which was used for the greater study, was performed by Khulisa Social Solutions, a non-governmental organisation in the Govan Mbeki District (where Leandra is

located) and also a community partner for the greater study. In total, 43 participants were recruited. This included 10 young adults in the age group 20 to 24. More information about the sampling and the participants in my study is given in Chapter 3 (Section 3.4.2).

1.8.3 Data collection

On 4 April 2017, a team of principal investigators of the greater study (who included lecturers from the University of Pretoria and the University of Brighton, United Kingdom), research facilitators or co-researchers (who included eight first-year M.Ed. in Educational Psychology students) and research assistants (B.Ed. Honours in Educational Psychology students and personnel from Boing Boing – a non-governmental organisation in the United kingdom) arrived in Leandra to collect data. I was part of the research facilitators. We used visual and narrative data collection methods, such as draw-and-write techniques, timelines, body-maps, and 'sand-tray' work. Chapter 3 (Section 3.4.3) contains more information on these visual and narrative data collection methods, as well as their advantages and disadvantages.

1.8.4 Data analysis and interpretation

Braun and Clarke's (2006), step-by-step thematic data analysis was used to analyse the data collected. Since thematic data analysis is inductive and identifies themes and patterns from the data, it works well with phenomenological studies. The detailed steps and process of thematic data analysis are explained in Chapter 3 (Section 3.4.4).

1.9 QUALITY CRITERIA

Lincoln and Guba (1985), initially outlined four quality criteria to ensure trustworthiness in qualitative research, namely credibility, dependability, confirmability and transparency. They later on added authenticity (Guba &Lincoln, 1994). All of these criteria are discussed in detail in Chapter 3 (Section 3.5).

1.10 ETHICAL CONSIDERATIONS

The greater project was approved by the Ethics Committee of the Faculty of Education, University of Pretoria (UP02/11/2016) (see addendum C). I also received approval from the Ethics Committee (EP 17/03/03 Theron 17-001EP) (see addendum D), for my part as a co-researcher in the project. Other ethical considerations regarding my study as part of the greater project are explained in Chapter 3 (Section 3.6).

1.11 CONCLUSION

A plethora of resilience studies are available in both the global world and in South Africa. However, limited research has been conducted that focuses on the resilience of young people in a context of drought. My aim in this study is to contribute towards and pave the way for new research in South African resilience literature by exploring the resilience of young adults in a context of drought.

Chapter 2 discusses the relevant literature that relates to the risks and resilience-enabling factors affecting young people in both a general context and in drought-specific contexts.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this chapter is to explore what literature says about the resilience of adolescents and young adults. I included studies about adolescents, as a limited number of studies have been done that focus on young adults aged 20 to 24 years only. Also, Cohen et al. (2003), explain that adolescent experiences have an impact on transition into adulthood. The sections of this chapter are organised in relation to the different systems that influence the resilience of young people, namely: the individual (adolescent and young adult); the family; the community; and the macro systems. In each section, I explore literature on general risk factors, drought-specific risk factors for the system, general resilience enablers and drought-specific resilience enablers for the system. All the general risk and resilience sections are based on South African studies, whereas the limited research on drought has required the use of global literature in the drought-specific sections.

2.2 THE INDIVIDUAL SYSTEM

The individual is at the centre of Bronfenbrenner's (1977), systems model. According to Kumpfer (1999), the individual is characterised by physical, emotional, cognitive, behavioural and spiritual factors. These individual aspects interact with the environment and can either put the adolescent and young adult at risk or protect them against adversity.

2.2.1 Individual risk factors

Because of the different developmental tasks associated with adolescents and young adults, this section discusses the risk factors of these groups separately. First, I look at the individual risk factors for the adolescent, followed by those of the young adult. Because of the scant drought research that focuses specifically on adolescents and young adults, the section on drought-specific risk factors discusses the groups jointly (unless it is specifically stated that the study is for adolescents or for young adults).

a) Individual risk factors for the adolescent

Adolescence is, according to Watson and Gable (2013, p. 108), "a period of cognitive, physical, social and emotional transition between childhood and adulthood." Many fundamental and

significant changes that occur during this period can place adolescents at risk. For example, during adolescence students are to an increasing extent vulnerable to peer pressure and liable to react to peer rejection than during childhood – because of the social cognition changes that are taking place. Changes in brain structure alter both cognitive functions and cognitive processes. Furthermore, when students enter high school, the cognitive demands on them increase substantially (Semrud-Clikeman & Ellison, 2009). Although adolescents' reasoning abilities improve, their ability to perform under stress is very different from that of adults. For example, adolescents are not able to self-regulate in the same way as adults (Watson & Gable, 2013).

Prince-Embury (2015), cites risk behaviours for adolescents as including suicide thoughts, intentions and plans; substance use and abuse; unsafe sexual behaviour; smoking, and other risk-taking behaviours. The Centres for Disease Control (CDC) monitors those behaviours of adolescents that contribute to mobility and mortality (Coleman, Wileyto, Lenhart & Patterson, 2014) and noted the following behaviours, which were also reiterated by Ortabag, Ozdemir, Bakir and Tosun (2011): smoking and drinking alcohol; inadequate physical activity; inadequate nutrition; sexual behaviour that may lead to unwanted pregnancy or infection; substance use and abuse; as well as behaviour that contributes to unintentional injuries, violence and HIV/AIDS. It is clear that HIV and AIDS pose a direct threat to youths' mental and physical health. Children and adolescents affected by HIV/AIDS have an increased probability of experiencing educational shortfalls and psychosocial distress, in particular internalising problems (Ebersöhn et al., 2015).

According to Forssman, Eninger, Tilma, Rodriguez and Bohlin (2012), adolescents also display externalising behavioural problems like inattention, hyperactivity/impulsivity and defiant behaviours. These externalising behaviours are related to high risk-taking behaviour and difficulties in everyday life, and research shows that there is a correlation between pubertal development and high risk-taking behaviour (Coleman et al., 2014; Koo, Rose, Bhaskar & Walker, 2012). Scholars suggest that the increased risk of sexual and other "delinquent behaviours" may be associated with hormonal increases (e.g. higher testosterone and estradiol levels) that elicit pubescent development. However, Koo et al. (2012, p. 593), explain that other scholars suggest a more composite "'biopsychosocial' model in which bodily changes associated with puberty affect how an adolescent self-perceives and is perceived by others (e.g. parents, peers and teachers)." Thus, pubertal development is likely to affect an adolescent's socio-emotional state and interpersonal interactions, this may in turn affect the adolescent's self-concept, cognitive processes and subsequent behaviours (Koo et al., 2012).

b) Individual risk factors for the young adult

The transition from adolescence to adulthood is a challenging stage for all individuals (Burt & Paysnick, 2012). It is a critical time during which young adults need to juggle several developmental tasks (Southerland, Casanueva, & Ringeisen, 2009), which, according to Burt and Paysnick (2012), include separation and individuation from one's family of origin; identity formation or the development of a coherent sense of self; the assumption of more autonomous functioning and greater control over one's life; as well as the formation of romantic attachments. Southerland et al. (2009), also noted a number of developmental outcomes of this life stage: educational attainment; full-time employment; self-sufficiency; starting a family of one's own. Mastering this developmental transition involves defining one's self (personal identity) and accepting where one fits into society (reference group orientation) (Baskin et al., 1998). However, failure to master some or all of these developmental outcomes may cause the young adult to be at risk of developing psychosocial pathologies.

Burt and Paysnick (2012), cited the psychopathological risks of young adulthood and explained that the period of young adulthood represents peak onset of some serious mental illnesses. These mental illnesses include schizophrenia and mood disorders, especially among females (continuing from adolescence). Rates of substance abuse were cited as increasing during the period of young adulthood, as well as sensation-seeking behaviours and impulsivity – which were noted to originate in adolescence (Dahl, 2004).

Young adults with a history of chronic illnesses and those who 'aged out of care' were cited as facing high risk when transitioning to adulthood (Burt & Paysnick, 2012). In a study cited by Merdinger, Hines, Osterling and Wyatt (2005), it was reported that young adults who came out of care can experience higher rates of unstable housing, problems with health care and mental concerns. A longitudinal study by Zuckerman, DeVine and Holmberg (2011), followed 14-year-old adolescents with spina bifida until the age of 30. Spina bifida is a congenital defect of the spine in which part of the spinal cord and its meninges are exposed through a gap in the backbone – often causing paralysis of the lower limbs, and sometimes learning difficulties. Zuckerman et al. (2011) report that these young people had difficulty realising the following developmental tasks during young adulthood: leaving home; attending college; maintaining employment and having romantic relationships.

2.2.1.1 Drought-specific individual risks for the adolescent and young adult

Climate change has led to weather extremes such as floods and drought all over the world. According to Dean and Stain (2007), drought has a slower onset and follows a more chronic path

when compared to other natural disasters like tornadoes and floods. Sartore, Kelly, Stain, Albrecht and Higginbotham (2008), studied Australian young men in remote rural areas who experienced persistent drought and found that drought gives rise to feelings of loss of control, failure, fear, helplessness and futility – and in the long run, these feelings may pose an increased risk of psychiatric morbidity. They also noted that the young men in the study had higher suicide rates, compared to their urban counterparts. Guiney (2012), also reported an increase in suicide rates in young men in remote rural areas of Australia. Ng et al. (2015), explained that this rise in suicide rates is a result of a lack of employment opportunities and stress associated with the increasingly unpredictable lifestyle in rural areas. They support the point made earlier that one of the developmental tasks for young adults is securing full-time employment and therefore, failure to accomplish this task may lead to suicide. Ng et al. (2015), further noted that drought can also lead to chronic health conditions like hypertension, cardiac disease and mental health conditions.

In their study on the effects of drought on young men living in Australian rural remote areas, Ng et al. (2015), noted that drought had profound effects on their levels of financial and emotional stress as well as anxiety, fear and loss. This fear was fear for the reoccurrence of drought. The subtheme of loss included financial loss and loss of identity. Anxiety as an effect of drought was also noted in a southwestern Iranian study which cited the effects of drought as including depression and anxiety, headaches and hypertension, low self-esteem and nervousness, poor concentration and negative attitude and feelings of isolation (Zarafshani, Gorgievski, & Zamani, 2007).

In a study by Carnie, Berry, Blinkhorn and Hart (2011), young people showed excessive worrying in the context of drought. They worried about things like money, their families and communities, as well as about their future. Thus, economic crises caused by drought can make adolescents uncertain about their future. The young people reported feeling anxious and overwhelmed by drought. Dean and Stain (2007), also cited drought worry as a high-risk factor in a study of young adults aged 18 and older. Kelly et al. (2011, p. 1332), argue that "worries about drought and general levels of distress coexist, with drought being a dominant theme among those currently anxious or depressed, and the worries being a symptom of that distress, rather than a trigger for such a distress."

According to the UNICEF Office of Research (2014), the general effects of climate change on individuals, including adolescents and young adults includes incidence of malnutrition, heat stress, physical and psychological trauma. Pregnant young women who experience stress and malnutrition can also give birth to children susceptible to health risks. This is also reiterated by

Tirado, Hunnes, Cohen and Lartey (2015), who noted that climate change has considerable implications for maternal and child under-nutrition in Africa.

Adolescents' and young adults' right to education might also be at risk during times of drought, as they are often kept from attending school when family livelihoods and financial resources are negatively affected by drought. In addition, children's access to education can be disrupted when schools are closed due to scarcity of water, and adolescents may be at risk of exploitation in the form of child labour and sexual violence (UNICEF Office of Research, 2014).

Some scholars noted gender differences in the drought-specific risks (Myeyiwa et al., 2014; Tirado et al., 2015). Drought augments the workload of women by increasing water stress and the time dedicated to fetching water for domestic purposes (Myeyiwa et al., 2014). Men commonly migrate and leave the women to look after the children. Climate change contribute to disease, morbidity and malnutrition, and mortality through various pathways. HIV/AIDS are amplified during drought because malnutrition increases the risk of acquiring an infectious disease and dying from it. The lack of access to safe drinking water and sanitation overwhelmingly affects the health of adolescent girls and young women (Tirado et al., 2015).

2.2.2 Personal resilience enablers for the adolescent and young adult

In different kinds of adversity, the individual adolescent and young adult use different kinds of resilience enablers in order to resile.

a) Physical well-being

Kumpfer (1999), explains physical well-being as involving good health and physical talents. Only a few South African studies have showed physical well-being as a protective factor of adolescents and young adults. Theron and Theron (2010), note that good health is a biological factor that protects the individual adolescent. This is also reiterated by Collishaw and colleagues (2015), who conducted a study in Cape Town, South Africa, involving 1025 children and adolescents who had been orphaned due to AIDS. Good health in these participants predicted resilience.

In the study by Hills et al. (2016), 10 adolescents (six males and four females) with a mean age of 16 who had been living on the streets of Durban for a month or longer were recruited. These adolescents reported that violence was experienced regularly, with females also citing rape. Personal strength was emphasised as a protective factor. This strength entailed demonstrated physical strength and ability, and therefore physical prowess was viewed with pride. One of the participants explained that "Everyone fights to live" (p. 6). In the same study, participation in sports activities also served as a protective factor.

b) Behavioural/Social skills

Agency – or the ability to imagine and effect change (UNICEF, 2014) – was revealed in most South African studies as a personal characteristic of resilient young people (Ebersöhn, 2013; Ebersöhn et al., 2015; Hall & Theron, 2016; Malindi & Theron, 2010; Mampane, 2014; Theron & Malindi, 2010). Ebersöhn (2013), explained agency as the determination or will to change one's situation in contrast to taking a passive stance when one is faced by adversity. An example of agency can be seen in the study by Malindi and Theron (2010). In their study, they interviewed 20 participants (17 boys and three girls, Sesotho and isiZulu) who were either children on the streets (street children spending their time on the streets yet maintaining links with their families) or street children in institutional care (hardcore street children who were accomodated in an institution or in a shelter). These street children managed to devise means for social and material support either from friends or social services. For example, one of the participants explained how he sought out the help of the care-givers at the drop-in centre to assist him with clothes as no one could afford to buy him clothes at home.

Most of the behavioural factors fall under what Theron, Theron and Malindi (2013, p. 75), term a 'resilient personality' or what Mohangi et al. (2011, p. 401), refer to as 'positive personal characteristics'. This resilient personality was explained as "intrapersonal traits and skills that promoted positive adjustment" (Theron et al., 2013, p. 75). These are communication skills (Lethale & Pillay, 2013; Theron et al., 2013); assertiveness; self-reliance; recreation (Malindi, 2014; Malindi & Theron, 2010); prosocial change (Malindi & Machenjedze, 2012); confidence (Mampane, 2014; Van Breda, 2017); stoicism and reflexivity (Theron & Malindi, 2010; Theron et al., 2013).

Ebersöhn and Bouwer (2013), did a study on the reconstituted family and postulated that the ability of the middle adolescent to accept authority and adequate development torwards greater independence are behavioural factors that enable their resilience. In the study by Hills et al. (2016) cited in 2.2.2 (a) above, substance use and smoking were used as buffers against the experience of violence on a daily basis. One male participant explained how sniffing glue helped him to escape from the stressors on the street. Mohangi et al. (2011), did a study on how children and adolescents affected by HIV/AIDS coped in institutions. Disengagement – which revealed itself in fantasy, denial, and detachment, was used as a coping strategy by these participants. Living in a world of fantasy entailed embracing the lives of superheroes and queens, with girls fantasising about living a glamourous and luxurious life. The aforementioned behaviours would probably not be recognised as resilience-enabling by mainstream societies, but they were effective for these

individuals in very specific risk circumstances. Ungar (2015, p. 7), conceptualised such behaviours as atypical and explained that "protective processes associated with resilience need not result in a set of dichotomous outcomes … as context will help decide the usefulness of a particular set of resilience-related qualities".

c) Cognitive competency

According to Kumpfer (1999), cognitive competency includes academic, planning and problem-solving skills. Theron and Theron (2010), Lethale and Pillay (2013), as well as Ebersöhn and Bouwer (2013), noted intelligence or intellectual competence as an individual protective factor for adolescents and young adults. Lethale and Pillay (2013), conducted a qualitative phenomelogical study with four adolescent learners from Sebokeng Township who had been orphaned and who lived in adolescent-headed families. These adolescents knew that their intellectual abilities enabled them to resile in the face of adversity; hence they experienced a sense of competence and empowerment. Academic achievement in the study by Lethale and Pillay (2013), relates to what was reported by Mampane (2014), as an achievement orientation. Middle adolescents in the Mampane study, who all lived in townships, were determined to succeed and affirm their strength. For example, one of the participants mentioned that "doing well at school is very important for me" (Mampane, 2014, p. 6). Regarding academic achievement and intellectual competence, Theron and Theron (2014), use the terms personal competence (ability to be aware of one's potential and to work hard to realise personal goals) and educational progress.

d) Emotional stability

According to Kumpfer (1999), emotional skills (e.g. emotional management skills and ability to control anger and depression), empathy and humor are aspects of emotional stability. Other characteristics in this domain are cited as happiness, recognition of feelings, ability to restore self-esteem, and hopefulness. In the South African articles that I reviewed, the following characteristics of adolescents and young adults had to do with emotional stability: emotional security (Ebersöhn & Bouwer, 2013); emotional intelligence (Ebersöhn et al., 2015); open and accepting attitude, emotional strength, self-control or self-regulation (Hills et al., 2016; Malindi & Theron, 2010; Mampane, 2014; Theron et al., 2013). Since self-control involves the ability to successfully control one's anger, it is considered an emotional management skill.

In a study by Malindi and Theron (2010), that reflected on the hidden resilience of street children, humour was found to be a further protective factor for these adolescents. Their humour was enacted in the form of teasing one another, and they explained that teasing and joking with one another made them forget the stressors of living on the street.

Theron and Dunn (2010), also cited emotional expression as a way of enabling resilience in adolescents whose parents had divorced. This emotional expression mostly involved crying, and the adolescents explained that they cried for various reasons – from anger to pain. They also expressed their emotions through writing poems and keeping a diary, as these provided a safe platform for venting their feelings.

e) Spiritual or motivational characteristics

Spiritual or motivational characteristics of resilience include "primarily cognitive capabilities which serve to motivate the individual and create a direction for their efforts" (Kumpfer, 1999, p. 197). Such characteristics involve dreams and goals; purpose in life; spirituality; belief in uniqueness or in oneself; internal locus of control; hopefulness and optimism; as well as determination and perseverance. Most of the spiritual characteristics are also positive personal characteristics such as hope, expectancy, optimism about the future, and focused future orientation (Collishaw et al., 2015; Ebersöhn, 2013; Ebersöhn et al., 2015; Hills et al., 2016; Lethale & Pillay, 2013; Mohangi et al., 2011; Van Breda, 2015). Van Breda (2015), did a study on nine young men who had left care and found that these resilient young men had a sense of hope for the future. He also noted that they worked hard to build up this hope, despite challenging life experiences and that they believed in their ability to beat the odds.

Religious engagement (Collishaw et al., 2015; Pienaar, Swanepoel, van Rensburg & Heunis, 2012), a form of spirituality that was cited in many South African resilience studies, related to spiritual connectedness and embracing God (Mohangi et al., 2011); adherence to religion (Malindi & Theron, 2010); and having faith (Malindi, 2014). Malindi (2014), explored the resilience-enabling factors in 30 female adolescent girls living on the street and noted that having faith was a key factor. For example, using the draw-and-write technique, one of the girls drew a cross and wrote inside "prayers". This adolescent girl explained that her prayers made her strong. Malindi and Theron (2010, p. 323), reiterated this point when they noted that "prayer was central to their [the young people's] hardiness".

Other protective factors found in the spiritual and motivational dimension were an elevated sense of aspiration (Hills et al., 2016); altruistic propensities (Mosavel, Ahmed, Ports & Simon, 2015); adherence to cultural values, including ancestral rituals (Theron, 2015) and being value driven (Theron & Liebenberg, 2015).

2.2.2.1 Drought-specific personal resilience enablers for the adolescent and young adult

In a study that Caldwell and Boyd (2009), conducted in New South Wales, Australia, 11 members of five farming families affected by drought – aged between 15 and 60 – were interviewed. Individual resilience enablers included the ability to stay positive, positive appraisals, optimism, cognitive dissonance and denial. In this study, adolescents and young adults suggested they felt more able to cope due to their higher levels of energy, and because of their perceived ability to change careers without loss of identity.

According to UNICEF (2014), young people sometimes exercise very significant agency and they have the ability to imagine and effect desired change. Being able to take action through playing a meaningful role in the face of drought can offer a kind of psychological protection, as it helps adolescents and young adults to feel more in control, more hopeful and more resilient. In another Australian study, the individual's connection with the land and identification of farming as a lifestyle was seen to positively influence rural workers' levels of stoicism and determination. Being connected to the land and place was a factor that contributed to increased resilience in rural individuals (Ng et al., 2015).

Working harder and relying on one's experiences were reported as mitigating factors in a study that explored Iranian farmers' (aged 20 to 85 years) resilience regardless of drought (Zarafshani et al., 2007). Emotion-focused strategies such as acceptance and praying were used to resile in the face of drought. Event appraisal (i.e. appraising an event as a threat) was also used to determine the coping strategies one would use to enable resilience. Threat perceptions have been argued to serve a protective function. This is also reiterated by Dean and Stain (2007), in a study on the impact of drought on New South Wales children and adolescents aged between 11 and 17. The adolescents reported that a belief in their personal ability to cope in difficult situations contributed to their resilience. Dean and Stain (2007), also noted that adolescents used humour as a protective factor – similar to adolescents and young people in South Africa who lived on the street.

A study that was conducted in China among Grade 8 learners (on average 17-18 years old) noted that the following personal resilience protective factors emerged during times of drought: self-efficacy; behaviour control; perceived vulnerability; belief in climate change; perceived necessity of adaptive behaviour; and perceived urgency of engaging in adaptive behaviour. Previous drought experience was significantly related to perceptions of saving water. Although experience influences behaviours, it most likely does so through its effect on perceptions such as attitudes,

subjective norms and perceived behavioural control. Knowledge is also important in the perception of drought and could significantly influence specific strategies that promote resilience (Deng, Wang, & Yousefpour, 2017).

2.3 THE FAMILY SYSTEM

There is no universally accepted definition of 'family' in the South African context. According to Sooryamoorth and Makhoba (2016), the family is an institution that is dynamic and subject to transition. According to Nkosi and Daniels (2007), there is a distinct difference between Western and African family structures. Western family structures are characterised by principles of individualism and independence, whilst African families are mostly extended families. The term 'extended family' is defined by Siqwala-Ndulo (1998, p. 415), as a "collectivity of people who live together, whose relationship could be traced through kinship or marriage and who [consider] themselves family". Nkosi and Daniels (2007), use the term 'household' instead of family, and argue that the term denotes "a common unit of social organisation that combines those who reside together and who contribute to the income generation, consumption and domestic activities, as well as extended family, who could live apart due to migration but do make contributions to household resources" (Nkosi & Daniels, 2007, p. 15). In this section, the term family and household will be used interchangeably, as most African families have components of both of the above explanations (Siqwala-Ndulo, 1998; Nkosi & Daniels, 2007). However, Daniels and Nkosi (2007), state that extended family structures in the South African context are not universal and family structures are influenced by availability of resources.

Kumpfer (1999), argues that the family context within which the adolescent or young adult grows up has a strong influence on risk and resilience processes. She further notes that when an acute or chronic stressor occurs, the family can buffer or aggravate its negative impact on the adolescent or young adult. In this section of my literature review, I am going to discuss what South African literature says about family risks and resilience-enabling factors that can either buffer or exacerbate the impact of stressors on both the adolescent and the young adult. I will also discuss drought-specific risks and protective factors in the African and global context.

2.3.1 Risks associated with the family system

Sooryamoorth and Makhoba (2016), as well as Lubbe (2007), explain that the combination or interaction of family-related factors like marriage, divorce, re-marriage, working mothers, adoption, migrant fathers and HIV/AIDS has an impact on the health and developmental outcomes of children, adolescents and young adults. As I was interacting with a wide range of

literature on South African families, I decided to group the risks as follows: family structure; family behaviour (parenting style, communication style, conflict and abuse); and family health.

a) Family structure

According to Nkosi and Daniels (2007), African households are more fluid and therefore give rise to more complex family structures. Advances and changes in the globalised culture force people to take cognisance of the wide variety of ways in which families are formed and the diverse familial contexts in which children grow up (Lubbe, 2007). I encountered the following different types of family structures in my study of South African families: married families; single parent families; extended families; grandparent-headed families; women-headed families (Sooryamoorth & Makhoba, 2016); same-gendered families (Lubbe, 2007; Sooryamoorth & Makhoba, 2016); reconstituted families (Ebersöhn & Bouwer, 2015); foster families (Madhavan & Schatz, 2007) and child-headed families (Ebersöhn et al., 2015; Mogotlane et al., 2010). Lubbe (2007, p. 261), suggests that "postmodern interpretations of the family argue that it is no longer possible to claim that any one type of family is 'better', more 'natural' or more 'normal' than another."

According to Germann (2005, p. 150), a child-headed household is "a household where parents or alternate adult caregiver/s is/are permanently absent and the person responsible for the day-to-day management of the entire household is less than 20 years of age". Mogotlane et al. (2010), view a child-headed household as one that is characterised by one of the adolescents or young adults in the house having assumed the principal responsibility for inhabitants as a result of a number of factors: parent/s or primary caregiver/s permanently or temporarily absent due to death, migratory work and abandonment or rejection of children; parent/s or primary caregiver/s was/were present but abused alcohol and/or drugs excessively, but now they are too ill, terminally ill or too old to provide the care required.

Mogotlane et al. (2010), conducted a study among 40 child-headed families from all nine South African provinces and reported that these children struggled to meet their instrumental needs (food, clothes, money, shelter and education). This was confirmed by Bonthuys (2010), who notes that child-headed families usually live in abject poverty. The child head (who is usually an adolescent or young adult) is reported to be the first one who is likely to drop out of school as he/she takes over caregiving responsibilities of siblings. The other children also reported feeling unsafe in their homes (Mogotlane et al., 2010). Furthermore, Bonthuys (2010), Cluver, Gardner and Operario (2008), explain that these children, adolescents and young adults – usually orphans – suffer not only from emotional grief of losing their parents, but also of low self-esteem and depression. In addition, they may lack a sense of agency and realistic goals for the future.

Mkhize and Msomi (2016), list the challenges faced by single mothers as the following: insufficient funds to support their families; playing the role of both parents; balancing multiple roles and responsibilities; and inadequate time to spend with families. An absent father figure in the household poses a challenge, especially for male adolescents and young adults who need a male role model. The absence of a father is felt more intensely by male adolescents and young adults, some who have to undergo rituals associated with becoming a man in society. In South Africa, 41% of children live in households where the father is either absent or uninvolved (Hall & Sambu, 2016). This is partly due to the high rates of unemployment, and men's inability to afford the traditional bride price (Mkhize & Msomi, 2016).

Sooryamoorthy and Makhoba (2016), mention that HIV/AIDS has nowadays caused many households to be headed by grandparents. They note that these grandparents do not only have problems disciplining their grandchildren and communicating with them effectively; they also face challenges in performing parental roles, as old values are no longer relevant in current contexts.

b) Family behaviour

The development of a personal ego identity is an important psychosocial task during adolescence and young adulthood (Erickson, 1968). The family serves as a basis from which to explore various identities, practise temporary commitments and receive feedback in relation to significant others (Low, Akande & Hill, 2009). According to Kritzas and Grobler (2005), positive parenting behaviours are viewed as important resources in adolescents' lives. For example, the way in which parents interact with their adolescent children and young adults has a profound influence on their self-perception.

Grove and Naude (2016), identify three parenting styles: permissive, authoritarian and authoritative. Kritzas and Grobler (2005), add two more – the traditional and the rejecting neglectful – and call what Grove and Naude (2016), termed 'authoritative', as 'democratic authoritative'. The first two parenting styles can put the adolescent or young adult at risk. A permissive parenting style is neither demanding nor controlling, and such parents do not provide firm guidance to their adolescents. This could well lead to adolescents becoming distressed and their development of ego identity being hampered (Sigelman & Rider, 2009). An authoritarian parenting style is highly taxing, but not receptive to the adolescent's developmental needs. Because authoritarian parents demand strict behaviour control, submissiveness, conventionality and external control, this parenting style makes it hard for their adolescents and young adults to search and gather information that would assist them to make commitments to an established ego identity (Koepke & Denissen, 2012).

While explaining the effects of divorce, Ebersöhn and Bouwer (2015), noted that parental conflict, before and after divorce, increases the risk of a variety of emotional and behavioural problems in adolescents and young adults. The young people feel trapped in the continuous conflict between their parents and they are often expected to act as intermediaries. This may leave them confused as they would like to maintain good relations with both parents. They are also scared that their intervention might be interpreted as disloyalty by the other parent.

Pillay and Wassenaar (1997), note that interpersonal family conflicts and family dissatisfaction are factors that feature most in the lives of suicidal adolescents. They further warn that adolescents who engage in self-destructive behaviours have been noted to grow up in families characterised by greater conflict and turmoil than those in which non-suicidal adolescents grow up. These families are characterised by a rigid interaction style which usually makes it difficult for individual members to initiate change. It also makes the adolescents and young adults feel that they lack control over their own lives.

Marchetti-Mercer (2003), argues that family life in South Africa is sometimes characterised by a multitude of violent phenomena. Early research (De Francis, 1969), into child abuse suggests that in families characterised by conflict and a great deal of disruption, children are less supervised and more vulnerable to sexual victimisation. Family conflict can manifest in extreme violence, such as domestic violence, physical and sexual abuse of children, and even family murder where one family member wipes out the whole family system. Adolescents and young people who come from families in conflict might therefore experience the family as an unsafe system. AIDS orphans are often vulnerable to maltreatment, as well as physical and sexual abuse from members of the extended family (Nduna & Jewkes, 2012). In a study by Choe and Zimmerman (2012), among 424 Zulu adolescents in township high schools around Durban, it was reported that family conflict was associated with violent attitudes among adolescents and young adults.

c) Family health

According to Ebersöhn et al. (2015), there is a bi-directional relationship between HIV and mental health. This means that the effects of living with HIV/AIDS or having a family member affected by the disease, increase the risk of mental illness. Children of HIV-infected mothers are at a high risk of developing behavioural problems and being prematurely exposed to grief and bereavement (Ebersöhn et al., 2015).

Deist and Greeff (2017), note that because South African hospitals are overcrowded, patient care for individuals with long-term or terminal illnesses like dementia ultimately falls upon family members. They further explain that these families often face considerable physical, psychological,

emotional, social and financial burdens. Collishaw et al. (2015), identify parental mental illness as a risk to the adolescents and young adults in the family. Some mental illnesses have genetic roots; thus the adolescent and young adult will be vulnerable to mental illness as well (Biovin, Wouters, & Giordani, 2013).

2.3.1.1 Risks associated with families challenged by drought

Alston (2007), noted the following risks for families challenged by drought in New South Wales in Australia: financial stress, high workloads, poor health (physical and mental), social isolation and alienation. The effect of poor health was confirmed by Nkosi and Daniels (2007), in their South African study. They also noted that numerous family responsibilities and obligations under drought conditions combined to take their toll on the lives of these families. The plight of women having to walk long distances to collect fuel and water to perform the bulk of agricultural activities and so expending their energy has been widely documented (Myeyiwa et al., 2014; Nkosi & Daniels, 2007). The situation is most desperate during the seasons of drought and famine. With men often in cities, women and children are hardest hit and they survive on inadequate and low-calorie food intake, which puts their health at risk. Women often experience conflicts between poor health and lack of resources. In an effort to fulfil their productive and reproductive roles, women often underplay their own sicknesses and do not consider themselves ill until the illness is so incapacitating that they can no more fulfil their roles and obligations. In these times, women especially are pushed to the limits of their physical, mental and emotional endurance (Nkosi & Daniels, 2007).

2.3.2 Family resilience enablers

"Despite physical, political and economic challenges, South African families have always maintained a certain extraordinary power, which guards their systems, thereby enabling them to sustain themselves, often under the most difficult conditions" (Nkosi & Daniels, 2007, p. 11). Supportive family relationships is a major theme that runs through studies by South African scholars who examined the characteristics of families that enable resilience in adolescents and young adults (Choe & Zimmerman, 2012; Collishaw et al., 2015; Deist & Greeff, 2017; Ebersöhn & Bouwer, 2013; Hall & Theron, 2016; Mampane, 2014; Nkosi & Daniels, 2007; Theron, 2015; Theron et al., 2013; Theron et al., 2011; Theron & Theron, 2010). In fact, Theron and Theron (2010, p. 4), note that supportive family relations include "joint participation in activities, experiences of belonging, being loved and being valuable within the family system, opportunities to pursue education, as well as the establishment of clear, consistent family ties".

For example, in their study of the resilience of young people with intellectual disability – aged 10-19 years and living in Gauteng – Hall and Theron (2016), report that supportive social ecologies enabled resilience in these young people. The adolescents' supportive network, which included family members like parents, caregivers and siblings, enabled them to regulate their behaviours and emotions. Encouragement from family members also empowered them to accept and commit themselves to going to a special school, and to master daily challenges.

In the same study cited above, unconditional acceptance of the parents, caregivers and siblings made adolescents diagnosed with intellectual disability willing to try new activities. For example, a drawing by one participant showed a smiling family, and the Afrikaans word 'liefde' (meaning love) and symbols of crosses were written above their heads. These crosses represented kisses and depicted belonging and love, all of which made the participant less afraid of failing (Hall & Theron, 2016).

In addition to supportive family relationships, the way in which families communicate supports resilience (Bhana & Bachoo, 2011). For example, Ebersöhn and Bouwer (2013; 2015), conducted a study on the resilience of middle adolescents (14-16 years) whose parents had divorced and reported that functional or effective communication between biological parents enabled the middle adolescents to be resilient. Closely related to this is positive family functioning, which mitigates the effects of adolescents' and young adults' violent attitudes and violent behaviour (Choe & Zimmerman, 2012).

Davids, Roman and Leach (2015), agree with Bhana and Bachoo (2011), in saying that parenting styles and practices have been specifically linked to the development of autonomous behaviour in adolescents and young adults. Though some parenting styles have been noted by some scholars as family risk factors (Grove & Naude, 2016; Koepke & Denissen, 2012; Sigelman & Rider 2009), Theron and Theron (2010), explain that some parenting styles actually encourage resilience. However, they also noted that this phenomenon can vary with race. An example is a study by Kritzas and Grobler (2005), which reported that mothers who exercised democratic-authoritative parenting practices inspired white youths to develop a sense of coherence as well as emotional coping strategies. However, the same approach aided black youths to develop problem-focused coping strategies. Grove and Naude (2016), note that permissive and authoritarian parenting styles are a risk to adolescents' and young adults' development of identity and autonomy. They also explain that an authoritative parenting style, characterised by demandingness and responsiveness, supports identity exploration and commitment in adolescents and young adults. This view is supported by Bhana and Bachoo (2011), who note

that authoritative parenting is characterised by parental warmth and responsiveness, and that it contributes directly to family cohesion.

As above, where parenting styles were (contradictorily) found to be both risks and resilience enablers, family structure also features on both ends of the spectrum – family risks and resilience enablers. Ebersöhn and colleagues (2015), postulated that presence of a parent or both parents provided a sense of security for the children and adolescents whose mothers were infected with HIV. Bhana and Bachoo (2011), noted that in extended families where parents are not able to provide warmth and responsiveness, other kin, such as siblings, grandparents, aunts and uncles may step in to provide affection, thus highlighting the role of the extended family structure in enabling resilience.

Collishaw et al. (2013), did a study with AIDS orphans (1 025 children and adolescents) living in urban settlements around Cape Town and noted that food security, lack of maltreatment and good care-giving quality were strong family-related resilience enablers for these orphans. Family resilience enablers identified in other studies include adaptive behaviours modelled by family members; maternal bond (Theron & Theron, 2010); and strong women in the family (Theron, 2015).

Deist and Greef (2017), conducted a study with 47 families in which there was an adult child (aged between 20-64 years) caring for a parent with dementia in the Western Cape province of South Africa. Along with family support, these authors reported that financial stability (62%), optimism (86%), as well as religion and spirituality (48%) enabled resilience for family members. Families participating in the study made use of spiritual support when adapting to caring for a family member with dementia. They believed that God gave them the strength to continue during difficult times and He would not have permitted their situation to prevail, unless there was a purpose.

2.3.2.1 Family resilience enablers in a drought context

An in-depth biography of a South African sharecropper – a farmer who pays rent for his land with part of his crops – provides an account of Kas Maine's household (van Onselen, 1996). Extreme drought conditions, compounded by lack of technical farming equipment, pushed the Maine household to the limits of its endurance; yet the Maine family worked from dawn to dusk and managed to not only to grow grain to feed the family, but also to export bags of grain and wool to adjacent territories. Tenacity, resourcefulness and versatility sustained this family in the face of various challenges – in this case, an oppressive, exploitative and unjust regime and drought.

Nkosi and Daniels (2007), noted that indigenous knowledge systems (IKSs) in the form of accumulated knowledge and environmental understanding are used by many South African families to resile in the context of drought. IKSs are not scientific and are not written down. They are also difficult to transmit to other societies. According to Ebersöhn, Loots, Mampane, Omidire and Malan-van Rooyen (2017, p. 729), IKS is the basic component of any country's knowledge system as it is used by people to "apply their skills, experiences and insights to maintain and improve their livelihoods". Despite the high rate of illiteracy among them, rural women rely on IKSs to preserve food stocks in times of droughts, and they have in-depth knowledge about plant taxonomy which they apply in the utilisation and sustenance of natural resources (Nkosi & Daniels, 2007). Thus IKSs provide inner strength to families to endure hardships and really make something from nothing.

A study by Moran, Adams, Bayokema, Fiorini and Boucek, (2006), explained how families in the Amazon use IKS to forecast the weather during El Nino-related drought periods. Families in the Amazon were reported to use a folk method to predict the months of rain during the five-month rainy period (December to April). They place five mounds of salt overnight on a table on Santa Lucia's feast day (13 December), and the following day, the state of the mounds forecasts the months that will have rain or not. Those mounds that remain whole signify drier than usual months, whilst those that break up due to moisture signify rainy months.

Despite widespread poverty and hunger, sharing continues to sustain families even when facing adversity. Individuals still think about the next person and are willing to lend a helping hand. In a study examining coping strategies when facing food shortages, it was found that participants in rural KwaZulu-Natal continue to share commodities. The culture of sharing provides a buffer system for many needy rural families who are often without any form of social support or safety net (Nkosi & Daniels, 2007).

2.4 THE COMMUNITY SYSTEM

There seems to be no consensus on the definition of the term 'community' in literature. Kramer, Seedat, Lazarus and Suffla (2011, p. 511), define the concept as encompassing a "collective, cooperative and unitary group of individuals". This is reiterated by Homan (2004), and Steiner (2014), who also noted that community consists of a number of people with something in common that connects them or that distinguishes them from others. Community can have a number of different meanings that may or may not include aspects of identity, geographical territory, areas of interest, and common goals and beliefs (Kramer et al., 2011). McMillan and Chavis (1986), distinguished between two major uses of the concept of community, namely the territorial and

geographical notion of community (neighbourhood, town or city) and the relational one (concerned with human relationships and not concerned with geographical location). For the purposes of this section, I am going to use the concept of community as defined by Reber et al. (2009, p. 329), who postulated that the term community refers to "a settlement of people concentrated in one geographical area [whose defining feature] is a self-consciousness on the part of each member that the group is a social unit and that he/she shares group identification with the others". Hence, this definition focuses on both the territorial and the relational impressions of community.

2.4.1 Community risk factors

Bronfenbrenner's (1977), ecological systems theory asserts that development is affected by contextual factors at multiple levels, including neighbourhood quality (Goodrum, Armistead, Tully, Cook, & Skinner, 2017). This section deals with various community risks, including violence and crime; disruptive peers; lack of community role models; poorly resourced schools; and lack of recreational facilities.

According to Tomita, Labys and Burns (2015), the apartheid regime destroyed social cohesion by disrupting family structures and communities, which gave rise to conditions prone to both violence and crime, especially in many black communities. This view is supported by Choe and Zimmerman (2012), Collishaw et al. (2015), as well as Meinck, Cluver, Boyes and Ndlovu (2015), who noted that community violence is rife in South Africa and youth living in townships experience disproportionate levels of violence, making them a high-risk group. In a previously cited study by Choe and Zimmerman (2012), it was reported that black South African adolescents who have exposure to violence (victimisation, witnessing violence and friends' violence) are susceptible to violent attitudes. Being brought up in a stressful environment tainted by chronic community violence causes feelings of helplessness and hopelessness, which contribute to depression in many adolescents and young adults (Tomita et al., 2015).

According to Prinstein, Boegers and Spirito (2001), adolescents and young adults who affiliate with friends who engage in risk behaviour will most of the time also engage in risk behaviour. In a study by van der Heijden and Swartz (2014), 137 young people (68 in the experimental group and 69 in the control group) from Gauteng and Limpopo communities that were under-resourced, with high levels of unemployment and limited infrastructure, were found to engage in transactional sex in a bid to conform to peer status (such as dating older men). In another study in Durban that looked at adolescent suicide risk factors, Vawda (2014), reported that peers' or friends' suicidal ideation emerged as a significant risk factor for personal suicidal behaviour in the adolescents.

Peer pressure can also manifest itself in different risk behaviours like substance abuse (Hills et al., 2016).

Atilola (2015), and Theron (2015), cited that poverty and social inequalities affect quality of life, and thus have a negative impact on mental health and well-being. Poverty in communities manifests itself in various ways, such as poorly resourced schools (Ebersöhn & Ferreira, 2011; Mampane, 2014), lack of service delivery and recreational activities, unemployment and crime (Atilola, 2015; van Breda, 2017).

Many scholars cite HIV/AIDS as a chronic stressor in South Africa (Collishaw et al., 2015; Ebersöhn & Ferreira, 2011; Lethale & Pillay, 2013; Ebersöhn et al., 2015; Loots, Ebersöhn, Ferreira & Eloff, 2012; Pienaar et al., 2012). According to Collishaw et al., (2015), as well as Lethale and Pillay (2013), HIV/AIDS causes other stressors for the adolescents and young adults, like poor health, educational disruptions, stigma, exposure to loss and early grief. Loots et al. (2012), explain that HIV/AIDS orphans are exposed to psychosocial stress through the experience of loss of multiple caregivers and relatives who become less able to support these orphans.

2.4.4 Drought-specific community-based risks

A study by Sartore et al. (2008), in a rural Australian community (mentioned in 2.2.1.1), reported that a perceived lack of resources exacerbated the impact of drought. This lack of resources related to finances; workload and workforce issues; the future of the community with fewer people to run businesses and undertake vital volunteer work (such as with the Rural Fire Service); and a lack of local services exacerbated by poor quality of roads when travel was necessary. Social isolation was reported as a further drought risk in this study, as participants reported a serious attrition of community life. Remaining residents were overstretched in their community commitments as the pool of potential volunteers shrank and drought affected their ability to donate time to social and volunteer activities. People became increasingly isolated as overwork and financial constraints forced them to reduce extra-curricular activities. This finding was supported by Ng et al. (2015), who reported that due to financial constraints during times of drought, rural residents in New South Wales, Australia, were not able to afford fuel to travel to sporting clubs. These financial constraints were compounded by lack of employment in the rural areas during drought, as most livelihoods depended on rain.

Carnie et al. (2011), also did a study in rural New South Wales, Australia, which explored the mental health of adolescents who experienced drought. They noted that social isolation, seen in young people losing friends and people support, high instances of home schooling and reduced

participation in community services, actually aggravated mental health problems in these adolescents. They furthermore reported that there was a shortage of positive role models and mentors for young people. Examples of barriers to accessing services included "remote location, not knowing service providers, and a lack of health services, partly due to the difficulty of attracting professionals to the area" (Carnie et al., 2011, p. 246). Economic crises in farming communities can render rural adolescents uncertain about their future. Carnie et al. (2011), found that young people had few opportunities for employment and they struggled with accessing youth allowances for tertiary study. Some had withdrawn from school due to financial problems and had to find a job (UNICEF, 2014). Young people also worried about their communities and lamented the fact that businesses and services had closed due to families leaving the area. They worried that their towns might die.

Environmental distress was cited as a community risk factor in a study by Sartore et al. (2008), among participants aged between 22 and 67 years. One female participant explained that lack of water often leads to the physical degradation of a community. This was associated with severe distress, anxiety-like symptoms and intense feelings of helplessness. Women in this study reported distress from losing gardens.

According to UNICEF (2014), poverty is a condition that does not only put communities at risk, it also makes recovery from climatic misfortunes like drought much more difficult. In the same vein, O'Farrell, Anderson, Milton and Dean (2009), argue that although a lack of rainfall is the principal cause of drought, the diverse socio-economic factors of different communities determine its severity. Thus, during drought, communities with low socio-economic status will be affected far more severely than those communities with high socio-economic status.

2.4.2 Community-based resilience enablers

Bhana and Bachoo (2011), name various community resilience enablers, namely safe neighbourhoods; access to quality schools and child care; access to quality health care; peer acceptance; supportive mentors; involvement in the community; and a social support network. Drawing on South African studies, Theron and Theron (2010), summarise these enablers as community resources (seen in schools); community support (seen in communities where adults are respected, opportunities are provided for therapy and bereavement counselling, active support and encouragement is received from peers, members are motivated towards community mobilisation and community synergy to limit crime and violence); and the provision of recreational activities.

The theme of the school as a community resource for adolescents and young adults is well documented in the South African context. According to Theron and Theron (2010), schools as resources are seen mostly in supportive teachers who act as role models, and in the school being a safe space for young people, providing various resources and maintaining academic excellence, after-school activities and the life skills curriculum. Subsequently, many studies were conducted in South Africa which identified schools as resilience enabling for young people and repeated the aforementioned ways in which schools and caring teachers in particular enable the resilience of learners (Choe & Zimmerman, 2012; Ebersöhn, 2013; Ebersöhn & Bouwer, 2013; Ebersöhn & Ferreira, 2013; Hall & Theron, 2016; Jefferis & Theron, 2017; Lethale & Pillay, 2013; Malindi, 2014; Mampane & Bouwer, 2011; Theron & Dunn, 2010; Theron, Liebenberg & Malindi, 2014; Theron & Malindi, 2010; Theron & Phasha, 2015).

In a study that compared resilience of adolescents who attended two secondary schools in Mamelodi, Gauteng, Mampane and Bouwer (2011), report that clear rules at school, teachers and management who accommodate learners' needs, and the availability of counselling services enable resilience of the learners in township schools. In another study, Ebersöhn and Ferreira (2011), conducted a study in 11 schools from three South African provinces (not stated) for a STAR (Supportive Teachers, Assets and Resilience) project. They explained that teachers use resources, form partnerships and use school-based resources to enable resilience in schools. For example, the teachers worked with various systems to identify vulnerable children and their families and referred them to relevant resource systems (Ebersöhn & Ferreira, 2011).

In a study by Jefferis and Theron (2017), 28 Sesotho-speaking adolescent black girls from the Free State Province of South Africa explained how their teachers enabled them to be resilient when faced with challenges. The authors also reported that these teachers enabled resilience by exercising resilience-enabling actions that included "listening and providing guidance, inspiring hope for a better future, and initiating supportive partnership with students" (Jefferis & Theron, 2017, p. 9).

The availability of recreation opportunities was cited by Malindi and Theron (2011), as enabling resilience in young people who lived on the street. These young people used the draw-and-write technique to explain what made them resilient during challenges. Their drawings focused on soccer as helping them to do well when they were faced with varied challenges. Malindi and Theron (2011), explain that soccer enabled these participants to play like other young people.

Community support comes in different forms and is also well reported. Studies focus on close relationships with prosocial adults (Choe & Zimmerman, 2012; Mampane, 2014; Pienaar et al., 2012; Theron & Malindi, 2010; Theron & Theron, 2010; Wild, Fischer and Robertson, 2011); access to a variety of community services and structures like safe spaces, social services, community facilities, presence and use of positive institutions and nature (Ebersöhn et al., 2015; Hall & Theron, 2016; Hlatswayo & Vally, 2014; Malindi, 2014; Malindi & Theron; 2011; Mosavel et al., 2015; Theron & Dunn, 2010; Theron & Theron, 2010; Theron et al., 2013).

In a study with learners from two secondary schools in Mamelodi, Pretoria, Mampane (2014, p. 6), reported that the ability of middle adolescents to "identify, access and utilise support (mostly adult support) as well as connect with competent people and source their assistance, guidance and advice" promoted their resilience. Mosavel et al. (2015), who studied 112 adolescents from a mixed black and coloured community outside Cape Town used oral narratives to explain how laws and regulations as well as community facilities and social services enabled resilience for them. The young participants also suggested that the alleviation of poverty and provision of better housing, food and employment would boost their resilience (Mosavel et al., 2015).

Faith-based organisations (FBOs) and non-governmental organisations (NGOs) play an important role in enabling resilience in communities (Burchardt, 2013; Malindi, 2014). Burchardt (2013, p. 628) defined an FBO as a "voluntary non-profit organisation, based on the principles of a particular faith, working towards collective goals, embedded in civil society, and modelled along the lines of its secular sibling, the NGO". He went on to explain that these FBOs run countless support groups and provide medical, psychological and spiritual counselling. They also offer assistance for orphans, health education, income-generating projects and especially programmes related to HIV/AIDS (Burchardt, 2013). Under the theme of having access to community-based care and support, the 30 IsiZulu- and Sesotho-speaking participants in Malindi's study (2014), explained that a certain NGO in the community enabled them to be resilient. This NGO provided food and clothes to the participants – thereby providing support and enabling these young people to do well in the face of adversity.

Supportive peers with a positive influence are also seen as resilience-enabling for adolescents and young people (Collishaw et al., 2015; Ebersöhn & Bouwer, 2013; Hall & Theron, 2016; Lethale & Pillay, 2013; Theron & Theron, 2010; Theron et al., 2013). An example is taken from the study by Lethale and Pillay (2013), where adolescents who headed families reported that peers, who also head households, supported them. One of the participants was cited as saying, "Our friendship is good; most of us are in a similar position, so we tend to help each other" (Lethale &

Pillay, 2013, p. 567). These authors also explained that positive peer relationships do not only predict future social competence, but also work competence and a positive self-concept. In a different study, Collishaw et al. (2015), reported that peer support fostered resilience in AIDS-orphaned adolescents.

2.4.2.1 Drought-specific community resilience enablers

Most drought resilience research is about farmers and very few studies deal with general communities (for example, Caldwell & Boyd, 2009; Carnie et al., 2011; Dean & Stain, 2007; Guiney, 2012). Also, these studies do not focus on how communities enable resilience in young adolescents and young adults. Caldwell and Boyd (2009), did a study with rural farming families in the southern parts of New South Wales, Australia. They interviewed 11 members of five families aged between 15 and 60 years, and identified five resilience-enabling themes that are community related. These are community as a resource; history in the area; social debriefing; community acts of caring; avoidance of negative social influences; and erosion of community spirit.

The theme of community as a resource focuses on how community events and the shared environment of farmers provided participants with a sense of belonging to a bigger group and is a recurrent theme in drought literature (Caldwell & Boyd, 2009; Kelly et al., 2011; Ng et al., 2015). In a study looking at community resilience enablers for people aged 18 and above in remote rural areas in Australia, it was reported that social support and a sense of community bolstered resilience in the participants (Kelly et al., 2011). This finding is supported by Ng et al. (2015), who conducted a study in the same context (participants from remote rural Australia aged 18 years and above). They reported that community cohesion or social connectedness, which was evident in a sense of belonging to the community, enabled resilience in the participants. Ng et al. (2015), went on to note that other community structures like charity organisations, state emergency services and churches, which brought food and other help, also enabled resilience for these participants.

Social debriefing is about having opportunities to rid oneself of stress (Sartore et al., 2008). Participants in the study by Caldwell and Boyd (2009), cited the local pub as a major place for debriefing. Sartore et al. (2008), reported that having opportunities to share the stress, talk about difficulties and gain emotional support, together with access to health support services, enabled resilience for community members. Sports clubs and churches were also reported as places for social debriefing (Caldwell & Boyd, 2009; Carnie et al., 2011; Ng et al., 2015).

On community acts of caring, particpants in the study by Caldwell and Boyd (2009), explained that indirect support from unlikely individuals gave a greater sense of coping. For example, one participant reported that having the bank manager ask after his health and checking to see that he was not abusing alcohol as a way of coping enabled him to see that people really cared about his well-being. This support was usually from professional contacts.

According to O'Farrell et al. (2009), social capital, which is apparent in social interaction, labour and land loaning or sharing community schemes are necessary for coping with drought. Institutional capacity and structures in supporting larger community-wide efforts were also essential. This view is supported by Caldwell and Boyd (2009), who, in their implications for public policy, concluded that governments should consider investing in the social capital of rural communities and recognise social capital as a community resource enabler. O'Farrell et al. (2009), furthermore noted that although wealthier communities are better buffered against the impacts of drought, members of the poor communities (who are at greater risk) are the ones who are more resilient to drought. These poor communities often take a proactive approach by adopting diverse income alternatives in anticipation of drought. For example, in a South African study by Ziervogel, Bharwani and Downing (2006), selling non-agricultural products (like clothes) was a strategy employed by poor farmers in the Vhembe district in Limpopo province.

In the study by Carnie et al. (2011), young people explained that in-school support facilitated resilience in the face of drought. This in-school support was provided mostly by teachers. UNICEF (2014) noted that governments need to invest in young people's health and education programmes so that the latter can have the capacity to pursue different occupations beyond rural livelihoods.

2.5 MACRO-LEVEL SYSTEMS

According to van Wormer and Besthorn (2017), macro-level systems include the global economy, political ideology, the corporate media and culture. In this section, I explain macro-level systems as including culture, state initiatives, global aid programmes and policies that heighten risks or enable resilience among adolescents and young adults. Henderson and Thompson (2016), explain that the concept of culture encompasses customs, traditions, laws, knowledge, shared meanings, norms and values of a group's way of life. This is supported by Papalia, Olds and Feldman (2009), who argue that culture incorporates all the behaviour and attitudes that are learned, shared, and transmitted among group members.

2.5.1 Macro-level risks

Cultural beliefs and practices can act as risks to adolescents and young adults (Nziyane & Alpashan, 2011). According to Mulaudzi (2014, p. 95), "in most African societies, girls are expected to be polite, pleasant and caring while boys understand that they should take command and assert themselves". Petersen, Bhana and McKay (2005), did a study in a semi-rural Zulu tribal area outside Durban in KwaZulu-Natal, South Africa in which they interviewed adolescent girls and boys aged 13-16 years. They reported the following rape-supportive cultural attitudes: virgin rape myth, traditional notions of rape myths; and normalisation of interpersonal violence.

In another study by Nziyane and Alpaslan (2011) in the Bushbuck Ridge local municipality, ten adolescents aged 16 to 17 years who headed households were interviewed. It was reported that the barriers for successful integration of child-headed households into extended families were varied and included reasons related to patriarchy. For instance, patriarchal social organisation inhibits extended families from taking in orphaned children from outside their patrilineage; paternal families are unwilling to take in orphaned children born outside of traditional marriages; and cultural beliefs respect deceased parents' wishes for non-integration of the children.

Mogotlane et al. (2010), consider inequitable policies as exacerbating risk factors for young people who come from child-headed families. In their study of a situational analysis of child-headed households from all nine provinces in South Africa, it was reported that policies addressed issues related to orphaned and vulnerable children (OVC), but few were specific about child-headed households (CHH). A lack of policies for CHH in non-profit organisations (NPOs) was also cited, as most NPOs had policies for OVC. NPOs reported problems with funding and management skills that were often poor and non-existent. Often, funding to support participating organisations was either not adequate, delayed or in some instances completely absent. This had a negative impact on service delivery by NPOs.

The implementation of national policies also presented a problem. For example, certain schools excluded children based on their inability to pay school fees, despite a 'no school fees' policy for designated schools and children (Mogotlane et al., 2010). According to Lesch and Adams (2016), ineffective alcohol regulations and policies exacerbate alcohol abuse as experienced by couples in the Cape Winelands of South Africa.

The history of the apartheid regime still has an impact on the lives of South Africans today. The apartheid government was characterised by racial segregation, violence, civil unrest, inequality and cruelty against citizens, especially in many poor black areas. This led to social disorder

qualities such as crime and violence, which evoked symptoms of depression in community members (Tomita et al., 2015).

Controversial government responses to the HIV pandemic exacerbated the impact of HIV in South Africa. Burchardt (2013), cited delay in treatment programmes through the public health sector during the time of President Thabo Mbeki. She also mentioned ill-conceived scientific research policies and cases of corruption in the implementation of HIV/AIDS programmes.

2.5.2 Drought-specific macro-level risks

In their study, Sartore et al. (2008), noted that government regulations regarding farming practices in Australia, water access and land cleaning were believed to exacerbate the negative effects of drought. These regulations were resented as a restraint on running the farm or business and made it harder to apply for drought assistance because of the volume of paperwork. It was furthermore noted that non-farming business people were not eligible for the emergency financial assistance available to farmers, even though their own businesses were drastically affected by the downturn in the farming sector.

2.5.3 Macro-level resilience enablers

According to Sarra and Berman (2017), *ubuntu* can serve to support resilience in times of profound adversity and great socio-economic disparity. This view corresponds with that of Mulaudzi (2014), who explained that *ubuntu* in social welfare is realised by offering help for the needy and caring for others. *Ubuntu* involves a “notion of human dignity by identifying with others and exhibiting solidarity with them, a commitment to the good of the community, whether local or international” (Sarra & Berman, 2017, p. 466). Sarra and Berman further note that *ubuntu* speaks to a common African humanity and people’s obligation towards each other that flows from an African interconnectedness, a cultural and philosophical concept that underscores the commonality and interdependence of members of a community. However, Theron et al. (2011), argue that the notion of *ubuntu* in South Africa (especially in cities) is being threatened by the adoption of individualistic and competitive cultures in South African communities.

In a study by Brittian, Lewin and Norris (2013), 55 black South Africans (18 years old) from Johannesburg’s disadvantaged neighbourhoods were interviewed and they reported that religion and spirituality provided them with emotional and social support. These young people perceived protection from a Higher Power. Religious experiences were deeply meaningful (Brittian et al., 2013).

Mogotlane et al. (2010), suggest that three government departments (Social Development, Health and Education) play a critical role in addressing the plight of orphaned and vulnerable children in South Africa. At a national level, the available policies enable provinces to draw up plans to ensure that the children's rights, especially in respect of education, health, safety and food are fulfilled.

According to Burchardt (2013), global aid from the USA, the EU, bilateral donors and churches alleviate specific challenges, such as the impact of HIV/AIDS in South Africa. The ARV treatment programmes run by the SA government greatly assist in this regard. In a study by Cluver et al. (2016), 3516 adolescents aged 10-17 were interviewed during 2009/2010 and they were followed up a year later in 2011/2012. Unconditional government cash transfers (household access to child grant or fostercare grant) and social protection (provision of social services identified in consultation with the South African national departments of Social Development, Basic Education and Health, UNICEF, PEPFAR-USAID; and Save the Children) were associated with risk reduction and directly mitigated the onset of adolescent HIV risk behaviour.

2.5.4 Drought-specific macro-level resilience enablers

My search did not yield many studies that showed drought-specific macro-level resilience enablers. Thomas (2008), focused on dryland farmers from Central and West Asia as well as Northern Africa. He reported a number of government initiatives that enabled resilience of the young people in these regions, namely the reduction of the risk of crop failure due to adverse weather; governments' introduction of help via debt forgiveness; livestock feed subsidies and crop insurance programmes; and a heavy reliance on direct food aid and relief employment. Another initiative cited by Thomas (2008), which is also supported by Osman-Elasha et al. (2006), is better and earlier warning of drought, as well as forecasts to prevent farmers from committing resources before rainfall outcomes are known.

According to Caldwell and Boyd (2009), governments should invest in the social capital of rural communities and recognise this as a potential resource that will enable farming families to adapt to and survive drought conditions. They should also provide financial assistance to existing community initiatives and collective coping strategies.

2.6 CONCLUSION

In summary, this chapter illustrated that there are multiple South African studies that explain individual, family, community and macro-level resilience enablers for adolescents and young adults. However, none of these focus specifically on the resilience of young adults in drought

contexts. This finding proves the importance of my study, which will explore the resilience of young adults in a drought context, namely the Leandra district in Mpumalanga.

The next chapter explains the methodology that I used to answer my research question and sub-questions.

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

In this chapter, I explain the methodology that I used in my study. I first explain the purpose of the study, followed by the paradigmatic perspectives that I used, namely the meta-theoretical paradigm and the methodological paradigm. The section on methodology focuses on research design and the participants who participated in the study. Next, I look at the data generation methods used (i.e. draw-and-write techniques, clay modelling, body mapping and "sand tray" work), as well as the data analysis and interpretation. This is followed by a discussion of the quality criteria used, and finally, the ethical considerations for the study are explained. Though my study was part of group project, table 3.1 shows the differences between team decisions and my own independent decisions.

Table 3.1: Differences between team decisions and own individual decisions

Team decision	**Independent decisions**
Overall research title: Patterns of resilience among young people in a community affected by drought: Historical and contextual perspectives.	*Individual research question:* Resilience of young adults in a context of drought.
Overall research design: Co-productive	*Own choice of design:* Phenomenology (for motivation see pp.39-40)
Overall sample: n=43	*Own choice of sample:* n=10 (from groups with only young adults to link to research question [see p. 3])
Overall research methods: • Arts-based activities • Clay modelling • Body-mapping • "Sandtray" work	*Individual methods implemented by me:* • Arts-based activities • Bodymapping • "Sandtray" work

3.2 PURPOSE OF THE STUDY

The purpose of this phenomenological study was to explore the factors that enable the resilience of young adults who have experienced drought in Leandra. The study also sought to understand how these young adults comprehend and explain their resilience in a context of drought. The nature of this study is therefore exploratory. McMillan and Schumacher (2014), suggest that an exploratory study is conducted either in a field where there is limited research or in a new field of enquiry. Though many resilience studies have been conducted in South Africa, very few focus on the resilience of young adults in a context of drought (Venter, 2015). An exploratory study does not offer absolute, decisive solutions to the research problem but tends to simply explore the research phenomenon – thus the researcher gains a better understanding of the problem (Singh, 2007). According to Dudovskiy (2018), exploratory research has certain advantages and disadvantages. On the one hand it is flexible and adaptable; it lays the basis for potential studies and may save time and resources by establishing at an early stage the type of studies that are worth pursuing. However, exploratory studies have the disadvantage that they produce qualitative data that may be subject to bias and they usually make use of a limited sample that may not sufficiently represent the target population (Dudovskiy, 2018).

3.3 PARADIGMATIC PERSPECTIVES

3.3.1 Meta-theoretical paradigm

For the purpose of my study, I chose to use interpretivism as the meta-theoretical paradigm. An array of scholars (Denzin & Lincoln, 2011; McMillan & Schumacher, 2010; Mertens, 2010) prefer to use the term 'social constructivism' for interpretivism. However, in this study I used the latter, because as a researcher I wanted the participants to interpret the perceived reality of their subjective experiences in living through the phenomenon being studied (resilience in the context of drought). According to Mertens (2010, p.16), in interpretivism, knowledge is developed within a pre-existing context and is always "interpreting and re-interpreting itself". Creswell (2013), suggests that the goal of interpretivism is to rely as much as possible on the participants' understanding of the phenomenon.

I decided to use interpretivism because I believe that a phenomenon can best be explained by those who are closest to it or involved in it. To gain a deeper meaning of resilience in the context of drought, I attempted to obtain rich information from those who have first-hand experience of drought in South Africa and who can therefore explain resilience in this context. Most of the research on resilience in drought that I encountered in my preliminary literature review was done

in Australia and Asia (Botterill & Chapman, 2002; Caldwell & Boyd, 2009; Carnie et al., 2011) and very few studies occurred in the South African context (Myeyiwa et al., 2014; Venter, 2015). According to Willis (2007), interpretivism is used when little literature is available on the context of the phenomenon. He further suggests that "interpretivism accepts and seeks multiple perspectives, being open to change, practising iterative and emergent data collection techniques, promoting participatory and holistic research and going beyond the inductive and deductive approach" (p. 583). This view is supported by Cohen, Manion and Morrison (2011), when they explain that interpretivism begins with the individual and sets out to understand his/her interpretation of the world around him or her. They further explain that theory is emergent and should arise from specific situations; it should be rooted in data generated by the research act.

Criticism levelled at interpretive approaches is based on the fact that critics of interpretivism argue that though there is a need to understand the behaviour of fellow beings from their personal perspective, it cannot be said that this serves the purposes of science (Cohen et al., 2011). Bernstein, Graczyk, Lawrence and Strunin (1974), mention that subjective reports might be incomplete and are sometimes even misleading. They further argue that if carefully controlled interviews such as those used in social surveys can yield inaccurate results, then the less controlled interviews used in interpretivism might carry even greater risks of inaccuracy. However, my co-researchers and I used member checking and triangulation to limit inaccuracies in the data. We went back to Leandra after we had finished our data analysis and confirmed with the participants that our findings were in line with what they had told us (see Addendum E).

3.3.2 Methodological paradigm

Different researchers use different methodologies, such as quantitative, qualitative and mixed methods approaches (McMillan & Schumacher, 2014). In my research project I used a qualitative methodology and approach because my research problem had to be explored in depth to gain a rich understanding of the phenomenon of resilience, specifically in the context of drought. According to McMillan and Schumacher (2014), qualitative research is concerned with understanding the social phenomenon (in this case resilience) from the participant's perspective, whereas the quantitative approach focuses on trends and explanations of variables (Creswell, 2005).

Qualitative research can be defined as a "situated activity that locates the observer in the world… [and] involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them" (Denzin & Lincoln, 2011, p. 3). Creswell

(2013), as well as Tuckman and Harper (2012), cite the characteristics of qualitative research as the following: research is done in its natural setting, thus there is no manipulation of variables like in the quantitative approach; findings must be considered with reference to their contexts and caution should be used when making generalisations; multiple and different methods are used to gather the information needed from interviews, field notes and observations; the researcher is the key data-collection instrument; and data analysis uses both inductive and deductive reasoning (even though Bogdan and Biklen (2006), argue that the emphasis is on inductive methods). In the greater study, we (co-researchers and I) went to Leandra to perform the study; hence we went to the participants in their natural setting. Our results were reported as pertaining to the resilience of adolescents and/or young adults in the context of drought; we did not intend to generalise for other contexts. Different methods were used to collect the data, for instance draw-and-write techniques, body-maps and sand work with figurines.

Tuckman and Harper (2012), allude to the fact that qualitative research is emergent. Instead of formulating a specific theory, qualitative research is grounded in data and calls for theories and explanations to emerge. This opinion is supported by McMillan and Schumacher (2014), when they contrast quantitative and qualitative research methods and processes and explain that whilst quantitative research uses a pre-established design, qualitative research uses an emergent design that revises decisions about data collection strategies in the course of the study. For example, in our study, the participants could choose for the first activity whether they wanted to use the draw-and-write technique or the clay modelling technique to answer the questions.

Though qualitative research provides rich information that yields deeper meaning from the participants' point of view, one may also face challenges when using this approach. Creswell (2014), cites a number of these challenges that can be summarised as follows: the researcher may be seen as intrusive; sometimes private information may be observed that cannot be reported (for example, cases of incest might not be divulged because of confidentiality issues); the researcher may lack good data-gathering skills. In the case of my research, it was the first time that I would do qualitative research; hence my co-researchers in the greater project and I underwent training that taught us the necessary observation and attending skills. Though we did not encounter any of these challenges during the data collection process, I was nevertheless nervous and felt that an experienced researcher might have gotten deeper data than I could gather.

The positioning of the researcher may furthermore obstruct rapport with the participants, which might influence the amount and quality of the information that the researcher accesses or gathers.

For example, my position as a postgraduate student, coming from another province and being of a different nationality (Zimbabwean) may well have been a disadvantage. Fortunately, this was curbed by the fact that I am a black woman who grew up in a rural area where drought is a common phenomenon. If the researcher has to use narratives and does not speak the language of the participants, there may also be a language barrier. In my study, we used mostly visual methods of data collection, especially to limit the language problem. We also worked only with participants who were able read, write and understand English.

3.4 METHODOLOGY

3.4.1 Research design

Creswell (1998) categorises qualitative research into five traditions, namely biography, phenomenology, grounded theory, ethnography and case study. My research followed the phenomenological tradition. Creswell (2013), as well as McMillan and Schumacher (2010), defines phenomenology as a method where several individuals explain how they understand a "lived experience" or phenomenon.

Regarding phenomenology in a qualitative study, Tuckman and Harper (2012), explain that the researcher involved in a phenomenological study should avoid bringing in assumptions about what is being studied. In addition, the researcher should not simplify a complex phenomenon by reducing it to a few variables, he/she should not be influenced by methods of data collection to change what is being studied, and he/she should allow for theory to emerge from the data. Creswell (2013), lists the features of phenomenology as emphasis on a phenomenon; common experience of a group of people; bracketing off (usually called performing epoché and meaning to explicitly or implicitly put away assumptions and pre-understanding (Adams & van Manen, 2017)); data collection (usually involves interviewing people who have experienced the same phenomena); deductive reasoning in data analysis; and discussion of the essence of the phenomenon. To do this, the researcher uses extensive and prolonged engagement with individuals. The researcher seeks the deeper meaning of the phenomenon from the participant's point of view (Rossman & Rallis, 2003).

As phenomenology draws on the individuals' lived experiences, a small number of participants can be selected to gather adequate information. This is in contrast to quantitative paradigms where designs like quasi experiments would require large samples as there is a need to generalise. By utilising qualitative methods with a small number of participants until there is data saturation, the researcher can gain in-depth information. Several challenges might be faced when implementing a phenomenological study. For example, it might be difficult to bracket off pre-

conceived ideas. We must remember that phenomenology is a qualitative design where the researcher is usually not objective but subjective. To make sure that the researcher does not interpret the data with preconceived ideas, McMillan and Schumacher (2010), suggest the use of member checking. Creswell (2013), notes that, in phenomenology, the researcher will need to state his/her own assumptions before the study. I am going to state clearly and simply what assumptions I hold in relation to resilience in the context of drought. I had two assumptions when I went to Leandra. My first assumption was that the young people in Leandra have experienced drought since the town is located in the district of Govan-Mbeki which was declared by the government as a drought-stricken area (News24 Correspondent, 2015). My second assumption was that though drought has a negative impact on individuals, people have the potential to adapt positively provided that hope, optimism, familial support and communal cohesion (among other things) are present in their lives.

3.4.2 Participants

When doing research, it would be difficult to collect data from the whole population (all the people about which one wants to conduct research) (Morgan & Sklar, 2012). To bypass this challenge, researchers make use of a sample. Creswell (2005, p. 359), defines a sample as "the group of participants in a study selected from the target population from which the researcher generalizes to the target population". The process of getting a sample is called sampling. Methods of sampling differ according to methodological approach and research design. Gentiles, Charles, Ploeg and McKibbon (2015, p. 1775), define sampling in qualitative research as "the selection of particular information sources from which data are gathered to address the research objectives". In a phenomenological study, sampling is simply defined as selecting informants (Cohen et al. in Gentiles et al., 2015).

There are different sampling methods of which the main ones are probability and non-probability sampling. The former is usually used in quantitative paradigms and the latter in qualitative paradigms. As my research uses a qualitative approach and a phenomenological research design, I have to use a sampling method that aligns to these approaches. Morgan and Sklar (2012), suggest that a phenomenological study usually uses purposive sampling because the researcher usually defines some criteria prior to the study to indicate the characteristics of participants. Yin (2011), defines purposive sampling as the selection of participants or sources of data to be used in a study, grounded on their expected depth and relevance of information in relation to the study's research questions.

As stated in Chapter 1, my study is part of a greater project (Patterns of resilience among young people in a community affected by drought: Historical and contextual perspectives). Hence the sampling was done for the greater project, in which 43 youths aged between 15 and 24, living in Leandra and having a working knowledge of English were purposefully selected. Leandra is a town located in the Gert Sibanda District of the Mpumalanga province in South Africa. It is a farming area and falls in the Govan Mbeki municipality which was formally declared drought affected (News24 correspondent, 2015). This municipality has a total population of almost 300 000 of which around 2 000 reside in Leandra, according to census 2011. Of Leandra's 508 households, almost 90% has access to tap water, while the local youth unemployment rate is more than a third (34.4%) (Statistics SA, n.d.).

Recruitment was facilitated by Khulisa Social Solutions – a non-governmental organisation in Leandra that was the community partner in the greater study. They used flyers to invite young people who fitted the criteria (between 15 and 24 years old, living in Leandra and having a working knowledge of English) to participate. My study (which is of limited scope) focused on the 10 young adults who constituted the two young adult groups (i.e. groups five and eight) in the greater study. Of these, 5 were males and 5 were females (see Table 3.2 for make-up of various groups) and their ages ranged from 20 to 24. The home language of these young adults was IsiZulu. Recruited young people were not asked to disclose specific additional demographics such as their individual ages and whether they were employed or not.

Table 3.2: Description of participants in the different groups

Group number	Number of participants	Age range
Group 1	6 (3 males, 3 females)	All adolescents
Group 2	6 (3 males, 3 females)	Mixed: 4 adolescents; 2 young adults
Group 3	5 (2 males; 3 females)	All adolescents
Group 4	6 (2 males; 4 females)	Mixed: 1 adolescent; 5 young adults;
Group 5	4 (2 males; 2 females)	All young adults
Group 6	6 (2 males; 4 females)	All adolescents
Group 7	4 (1 male; 3 females)	All adolescents
Group 8	6 (3 males; 3 females)	All young adults

Purposive sampling normally works around the principle of data saturation. Data saturation means that all information that needed to be unearthed from the participants has been exhausted and no additional data can contribute anything of significance to the study (Gentiles et al., 2015). Sample size in sampling depends on the research design. For example, in a case study, selecting one participant may be enough to gather the relevant information (see Odendaal & Moletsane, 2011). In my study I used data collected from two of the eight groups which had young adults only to reach data saturation. As reported in Chapter 4, the young adults in these two groups provided very similar accounts of drought-related challenges and resilience, and so I was satisfied that the themes were saturated. I exclude the young adults in the mixed groups because the mixed-groups generated data was broader and less developmentally specific (Theron, 2018).

3.4.3 Data collection

I used visual and narrative data collection methods. In an article that explored the challenges of applying a multi-country study research design in a rural, resource-poor South African research site, Theron (2016), highlights how the use of visual co-productive data collection methods can provide rich and in-depth information compared to the traditional face-to-face interviews. Therefore, I used different visual methods to collect data, namely clay modelling or drawings, body-mapping and "sand tray" work. These visual methods were not used on their own; they were accompanied by narratives that served the purpose of explaining what the participants modelled, drew or mapped.

In the greater study, the participants were invited to join eight groups and each group had a research facilitator (all master's degree students like myself). I facilitated Group 4. Prior to our work in Leandra, we (the co-researchers) were trained by the principal investigators from the universities of Brighton and Pretoria to use arts-based methods to elicit participant insights. Each of us had a manual with prompts and a set of research questions to facilitate uniformity across groups. As a group of co-researchers, we co-owned the data that was produced.

3.4.3.1 Arts-based methods

In their groups, the participants used an arts-based method (either a clay-modelling method or drawings or both – whatever the group was comfortable with) to answer the following questions:
"How do you know that there is a drought?"
"When is a drought serious? /When does a drought affect you?"
"How does this, [whatever young people answer in previous question] affect you?"

The answers to these questions assisted me in answering one of my sub-questions: *Which aspects of drought do young adults from Leandra find difficult to deal with?* Both groups (five and eight) in my study used the draw-and-write technique only. Participants were given a large sheet of paper and coloured pens to make their drawings (see Photo 3.1). After they had drawn and written their answers to the questions, they had to explain these drawings to the facilitators of their groups. Their explanations were audio-taped. Facilitators probed and clarified to get rich descriptions and understanding of what the participants explained.

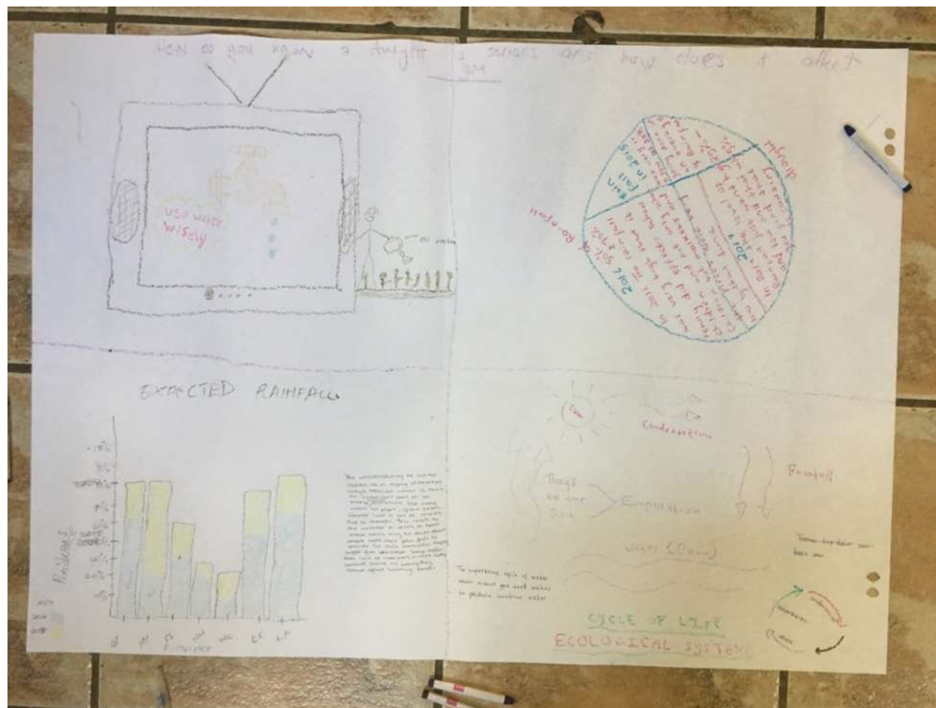

Photo 3.1: Drawing made by one young adults group

According to Lima and de Lemos (2014), the draw-and-write technique is a qualitative data collection procedure that involves asking a participant to draw a picture in response to a research question, and to write down any comments or associated ideas. These authors went on to note that the draw-and-write technique increases response validity since it does not presuppose the participants' answers. While working with the group I facilitated, I noted that the participants were hesitant at first. Since I had told them not to bother about the quality of drawings, they later on worked together to make a drawing on the large sheet of paper and write in their explanations. After the activity, they even reported having enjoyed using the drawings. This is in line with Hartel's (2013) finding, namely that one of the advantages of the draw-and-write technique is that it is fun.

3.4.3.2 Body-mapping

Body-mapping is the use of life-size drawings or paintings, which begins with participants tracing the outline of the body (see Photo 3.2). Body-mapping emerged in South Africa and was used to explore the social, emotional and physical aspects of individuals with HIV/AIDS (Maina, Sutankayo, Chorney & Caine, 2014). In the greater drought-focused study, body-maps were used to address the following questions:

"How does drought affect the health of young people in this community?"

"When there is a drought, what helps you stay healthy (i) in your body, (ii) in your mind and (iii) in your heart?"

The data collected in response to these questions enabled me to answer my second sub-question, "*What supports resilience for young adults in a context of drought?*" In body mapping, the participants worked in pairs in their different groups and mapped each other's body on a large piece of paper. Participants Then, various symbols were drawn or pasted on the drawing and the participants explained these to the researchers (see Photo 3.3). Their explanations were also audio-taped.

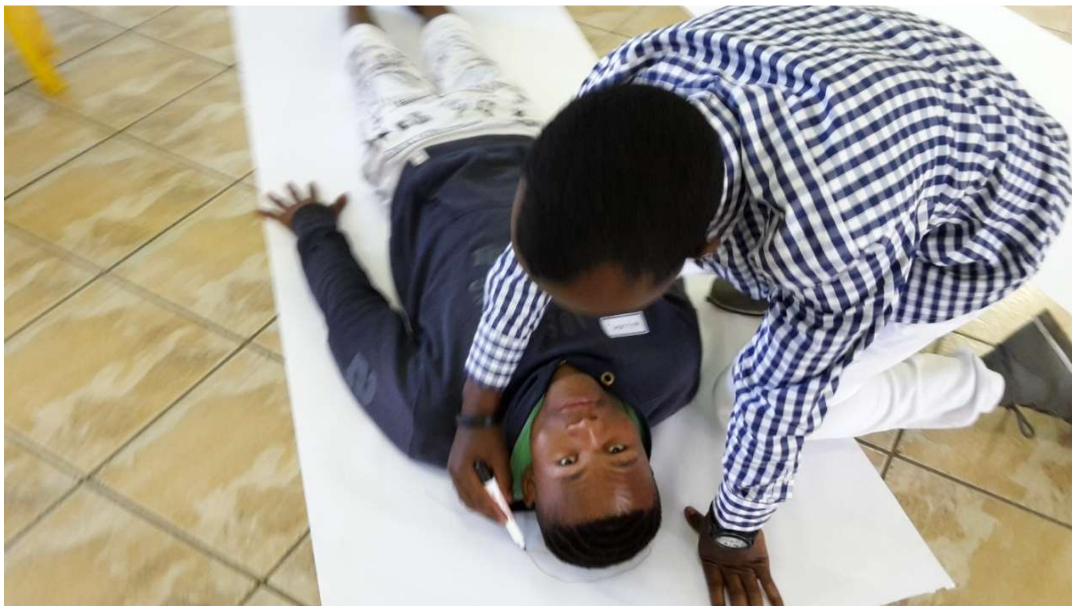

Photo 3.2: Participants in Group 5 mapping each other [participants provided permission for their photographs to be made public]

Figure 3.3: A participant in Group 5 with his finished body map

De Jager, Tewson, Ludlow and Boydell (2016), highlight a number of benefits of using body-mapping. It necessitates an association to the experiences of the body; it excludes imposition of one's cultural understanding on others; it might lessen language barriers; and there is also richness of the life stories. However, some potential pitfalls are also associated with body-mapping as a data collection method. Some people may find body-mapping intrusive; others may feel pressured to produce a positive story; and there are ethical considerations about the ownership of the map (Boydell, Gladstone, Stasiulis, Davidson, Nadin & Cheng, 2016). Taking into consideration that body-mapping might be viewed as intrusive by other people, participants were given the freedom to choose their own partners or even decline to participate. To address the ethical issue, we (the co-researchers) asked for permission to take photos of the body maps and most of the participants voluntarily gave their body maps to the researchers.

3.4.3.3 "Sand-tray" work

"Sand-tray" work (sand and figurines) was also used in groups for data collection. I use the term "sand-tray" work because this method has features in common with clinical sand-tray work (i.e. participants projected their experiences/insights using sand and figurines). However, my co-researchers and I did not follow the clinical modus operandi associated with sand-tray work (see Webber & Mascari, 2008).

Participants were given sand as well as a selection of different figurines and asked to portray their stories to answer the following questions:

“What does it mean for a young person to be OK when there is drought?”
“What/who makes it possible for young people to be OK when there is drought?”

Each group told a collective story, with individual participants adding to the story as they preferred. The information collected from the answers to these questions were used to provide answers to my second sub-question, “*What supports resilience in young adults in a context of drought?”* Photo 3.4 shows an example of their sand-tray work.

Photo 3.4: “Sand-tray” work by Group 8

Though visual methods of data collection have many advantages, Theron (2016), warns that they should not be deified, as language remains a barrier. As seen above, all the visual methods were used in conjunction with narratives. In our study – though language was not really a problem – participants tended to have discussions on their own in their own home language, after which they reported back to the researchers in English. An example is the following verbatim extract taken from Group 8, Activity 1.

“You can explain something about Mpumalanga…”

(Group discussion in a mix of English and indigenous language): “…because Mpumalanga is the one with a lot of rain, because why she choose Mpumalanga, because Mpumalanga is the

only province which received a lot of rain among the provinces. But last year there's drought. Among all the provinces."

3.4.5 Data analysis and interpretation

All the information that was collected was audio-recorded and transcribed (i.e. put into text) so that it could be analysed. Each co-researcher made a verbatim transcription of the data from her group. The project manager listened to the original audio-recordings and checked the accuracy of each transcript. All the transcripts were then merged to form the final data set. Although I did not generate all the data, personally, my analysis of the insights of young adults-related project data is the first analysis.

The data obtained during the data collection was vast and dense, and some of it was not relevant to my research questions. Therefore, I purposefully selected the information that was significant for my research and left out the rest. This process, called winnowing by Quest, MacQueen and Namey (2012), allowed me to focus on the data from the two groups that comprised young adults only. In our reflections on the research process, some of the principal investigators agreed that the mixed-groups generated data was broader and less developmentally specific (Theron, 2018).

According to Rossman and Rallis (2003), data analysis is shaped by the research design one uses, with phenomenological studies usually using thematic analysis. Thematic analysis is defined by Braun and Clarke (2006, p. 79), as "a method for identifying, analysing and reporting patterns (themes) within data". This corresponds with the view of Kawulich and Holland (2012), who explain that in phenomenology, thematic analysis would be used by identifying themes of how the different participants experience the phenomenon (resilience in the face of drought).

Different scholars use different steps in the process of thematic analysis (Creswell, 2014; Braun & Clarke, 2006; Kawulich & Holland, 2012). For the purpose of my study, I utilised Braun and Clarke's (2006, p. 87) step-by step guide to thematic analysis which happens in six phases and is explained in detail below.

***Phase 1 – Familiarising yourself with your data*:** This step involves transcribing, reading, re-reading and writing down preliminary ideas. According to McMillan and Schumacher (2014), transcribing involves taking all kinds of data collected (from notes taken during observations, interviewing, audio-tapes and visual images) and converting them into a format that will enable data analysis. Thus, as group facilitators, we transcribed all notes and audio files that had been recorded from the different groups with whom we worked on the day of data collection. However, since my study involves data from groups that I did not facilitate during the research process, I

had to familiarise myself with it by reading the transcriptions of the young adult groups three times. I also personally checked the transcripts against the original audio files as is recommended by Braun and Clarke (2006).

Phase 2 – Generating initial codes**:** This step involves what Creswell (2005), termed open coding. Rossman and Rallis (2003), defined a code as a word or a short phrase that captures the idea of what is going on in the data in a way that links it to the research question/s. I coded my data manually by working systematically through each data set and giving full and equal attention to each data item. I used the text highlight function as I worked on the data on the laptop. Appendix A contains an example of the open coding process I conducted.

Phase 3 – Searching for themes**:** In this step I assembled codes into possible themes. According to McMillan and Schumacher (2014), themes or categories are elements of grouped codes. For example, I gathered all the data that related to a particular theme from the two groups. An example shown in Appendix A shows a section of data and how I grouped the open codes from that section for three themes from one group.

Phase 4 – Reviewing themes: This step involves checking if the themes are linked and inter-related. Creswell (2005), terms it axial coding and explains it as putting data back together in order to make links between categories. For example, for the greater study, we as the co-researchers afterwards had a consensus coding meeting where we met with the principal investigators (physically and via Skype) and reviewed the themes that emerged from the different groups (see Photo 3.5).

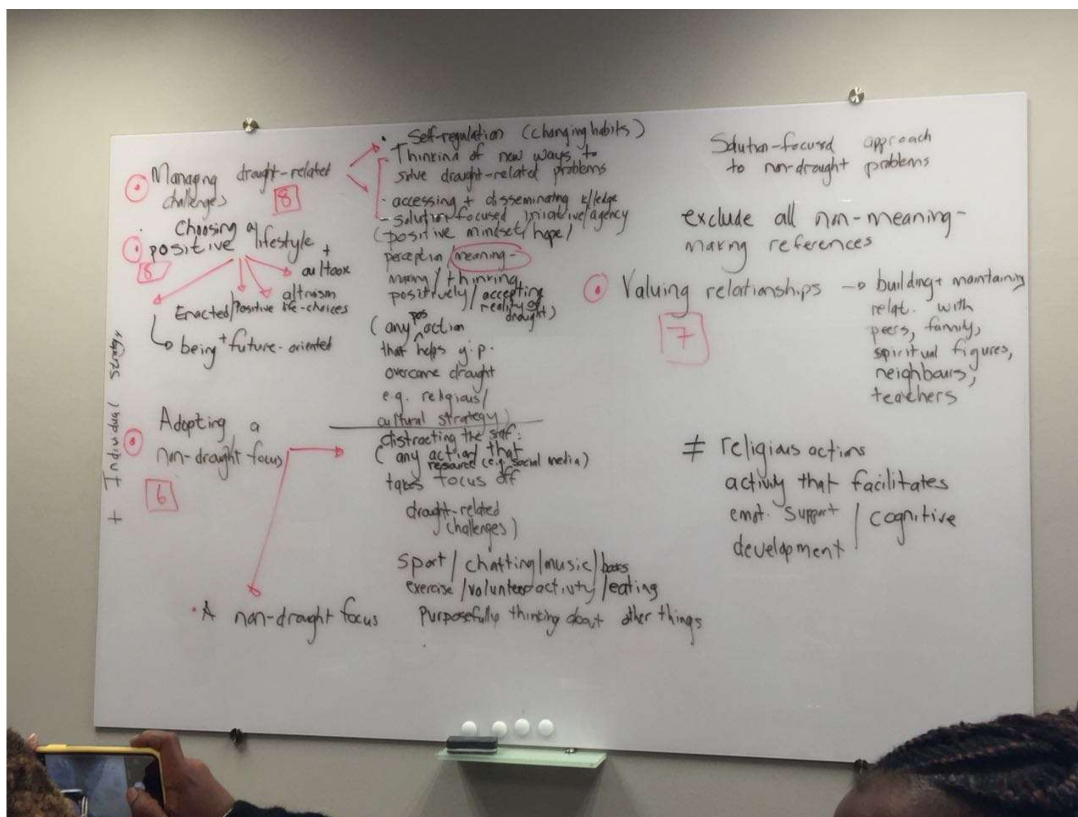

Photo 3.5: An example of review of themes during the post-consensus coding for the greater project

Phase 5 – Defining and naming theme: This step involves honing of the themes and the whole story, as well as creating precise definitions and names for each theme. Once the steps in Phases 1 to 4 had been completed, I had to review the names of the themes and generate definitions for each theme reported in Chapter 4. For example, before I was able to finalise the theme name 'unmet basic needs', I considered a number of alternatives. First, I named this theme 'insufficient physiological needs', then 'restricted access to physiological needs', then 'restricted access to physiological resources' and finally 'unmet basic needs'. This theme covered young adults not having enough basic resources, for instance water and food, hence the sub-themes 'lack of water' and 'lack of food'.

Phase 6 – Producing the report: In this step a final analysis was made of chosen excerpts and they were linked to the research questions and literature to produce a scholarly report of the findings. This is where I linked my data to existing research as will be seen in Chapter 4 when I discuss the findings.

I chose thematic data analysis as it is a relatively easy and straightforward qualitative data analysis method (Braun & Clarke, 2006). However, Braun and Clarke (2006), warn against some pitfalls of thematic analysis, namely failure to analyse the data; using data collection questions as themes; a weak analysis; claims that are not supported by data; no relation between theory and analytic claims or between research questions; and the form of thematic analysis used.

3.5 QUALITY CRITERIA

A major challenge that most researchers face when doing research is achieving quality. According to Cope (2014), the trustworthiness or truth value of qualitative research and the transparent manner in which the study is conducted are vital to the expediency and reliability of findings. Conelly (2016, p. 435), defines trustworthiness or rigor of a study as "the degree of confidence in data, interpretation used, to ensure the quality of a study". Many qualitative researchers have used the criteria outlined by Lincoln and Guba (1985) to ensure trustworthiness in their research (Conelly, 2016), namely credibility, dependability, confirmability and transparency (later on they added authenticity) (Guba & Lincoln, 1994). These criteria are discussed in detail below.

3.5.1 Credibility

Polit and Beck (2012), define credibility in qualitative research as the truth of the data, the participant views and their interpretation by the researcher. According to Cope (2014, p. 435), the reader should ask questions like, "Was the study conducted using standard procedures typically used in the indicated qualitative approach, or was an adequate justification provided for variations?" Guba and Lincoln (1985), offered various strategies for establishing credibility, such as prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, referential adequacy and member checking. In the greater study, we did the latter – member checking. The co-researchers/facilitators had a peer debriefing session where we created a Google slide document and shared it with each other. On these slides, posters were designed that summarised the themes that had emerged from the data collected (see Appendix E). The principal investigators, other co-researchers and I went back to Leandra on 24 June 2017 to check with the participants that the themes that had emerged from the data were in line with what they had explained in the data collection procedures. The participants were again invited to join a group. Eight groups were formed, and each group had a facilitator. I facilitated one of the groups. We (the facilitators) presented the posters to the participants and gave them a chance to either accept or refute the findings in the posters. The participants agreed that the themes were a true reflection of what they experienced and had reported during the data collection process.

3.5.2 Dependability

According to Polit and Beck (2012) and Tobin and Begley (2004), dependability refers to the consistency of the data in similar contexts. Strategies for attaining dependability include triangulation, splitting data and duplicating the analysis and use of an audit trail (Lincoln & Guba, 1985). An audit trail involves keeping a record of data management procedures and decision guidelines that detail the chain of evidence or decision trail (McMillan & Schumacher, 2014). The record includes codes, categories and themes used in description and interpretation, as well as drafts and preliminary diagrams. The audit trail for my study (see Addendum A) was used to heighten its dependability.

3.5.3 Confirmability

Confirmability refers to the researcher's ability to demonstrate that the data represents the participants' responses and not the researcher's biases or points of view (Polit & Beck, 2012). Conelly (2016, p. 435), defines confirmability as the neutrality or the degree to which findings are consistent and could be repeated. Guba and Lincoln (1985), mention triangulation and the audit trail as strategies that can be used to check confirmability of the study findings. In the greater study, we used triangulation. Thus, almost all themes were consistent throughout all groups. Even in my study, the themes in the two groups that included young adults only were consistent. For example, though groups with adolescents reported that compromised education was difficult to deal with, neither of the groups with young adults reported this. All young adults nevertheless indicated that they found economic hardships (sub-theme unemployment) difficult to deal with. In my opinion, this could be repeated in any study as adolescents are of school-going age and young adults are expected to be working.

3.5.4 Transferability

The characteristics of transferability extend to the findings that are useful to persons in other contexts (Conelly, 2016; Cope, 2014). Cope (2014), explains that a study will meet this criterion if other individuals who are not involved in the study find the results meaningful and readers can associate the results with their own experiences. I included a description of the participants using the limited information that was available and used a thick description of the context to make sure that my results comply with this criterion. According to Creswell (2014), thick descriptions may bring readers to the situation and provide the discussion with an amount of shared experiences. Thus, readers who come from drought-stricken areas and are adapting positively should be able to relate to the findings of the study.

3.5.5 Authenticity

The capacity and degree to which the researcher truly articulates the feelings and emotions of the participants' experiences is the definition that Polit and Beck (2012), ascribe to authenticity. To establish authenticity, I used member checking. After the initial data collection session, the co-researchers and I had to go back to check with the participants whether they agreed with how we explained their experiences in the themes highlighted from the data collected. Their confirmation suggested that our interpretation of their insights was an authentic account of their experiences and knowledge.

The above criteria are mainstays of trustworthiness in qualitative research. However, additional considerations, like ethics, are present and may affect the integrity and usefulness of a study (Conelly, 2016). Next, I am going to look at ethical issues that were considered in my study.

3.6 ETHICS

My participants were young adults aged between 20 and 24 years. Informed consent (see Appendix B) for the greater project was not obtained by myself but by Khulisa Social Solutions, which was a community partner. I nonetheless checked that all the participants in my group understood what the study involved. For example, I explained that participation was voluntary and that participants could withdraw from the study at any moment if they wished.

It was difficult to maintain the privacy of participants as activities were done in groups. Participants were informed of this in the consent process and they were given the option to use a pseudonym. However, most of the participants were comfortable with using their names. In reporting the data, I used participants' names or pseudonyms, depending on what each participant chose. They consented to me including photographs that showed their faces.

In all the activities, I endeavoured to ensure the best interests of the participants and protect them from any harm due to my study. According to Ogletree and Kawulich (2012), harm is not necessarily physical; it can be emotional or psychological and can happen as a result of discussing sensitive issues (like abuse) in one's past that were emotionally charged. During the data collection activities, the principal investigators – who were mainly educational psychologists – were on stand-by in case they were needed for emotional intervention. However, no such case arose during the data collection activities.

The greater project was approved by the Ethics Committee (see Addendum C), but before I could carry out my study, I also had to get ethical approval from the Ethics Committee for my part as a co-researcher in the project (see Addendum D for ethics clearance certificate). During the whole

process, I adhered to the guidelines for ethical conduct in research, as stipulated by the Health Professions Council of South Africa.

3.7 CONCLUSION

This chapter explained the methodology used in my research. I also explained the quality criteria together with the ethical considerations of the study. Given my experiences in Leandra, in my opinion, the most valuable part of the method was body-mapping. This might be because although the participants helped each other to draw the body-maps, they still worked individually in answering the given questions. Thus, no voice was silenced. This might also explain why the individual system yielded more themes (four) compared to the other systems (which had one theme each) – as will be seen in the next chapter when I report the answers to my research questions.

CHAPTER 4

RESULTS AND FINDINGS OF THE STUDY

4.1 INTRODUCTION

In this chapter, I present the findings of my study. In reporting these findings, I include excerpts from the data sets and photos of relevant drawings, body-maps and/or "sand-tray" work. The findings are then linked to the literature study I conducted and thereby addressing my research questions. I have structured this chapter into two sections in order to answer my primary research question, namely "How do the young adults of Leandra explain their resilience in a context of drought?" The first section answers my first sub-question, "Which aspects of drought do the young adults in Leandra find difficult to deal with?" The second section addresses my second sub-question, "What supports the resilience of young adults in Leandra?"

4.2 HOW DO THE YOUNG ADULTS EXPLAIN THEIR RESILIENCE?

4.2.1 Which aspects of drought do the young adults find difficult to deal with?

There was no question that particularly asked the participants to name aspects of drought they found difficult to deal with. Thus, to answer this question, I went through the data and identified excerpts where participants mentioned words like "it affects us", "it was difficult", "that was uncool", "it was hard" or "you can't survive", to mention just a few. Three themes emerged (as summarised in Figure 4.1).

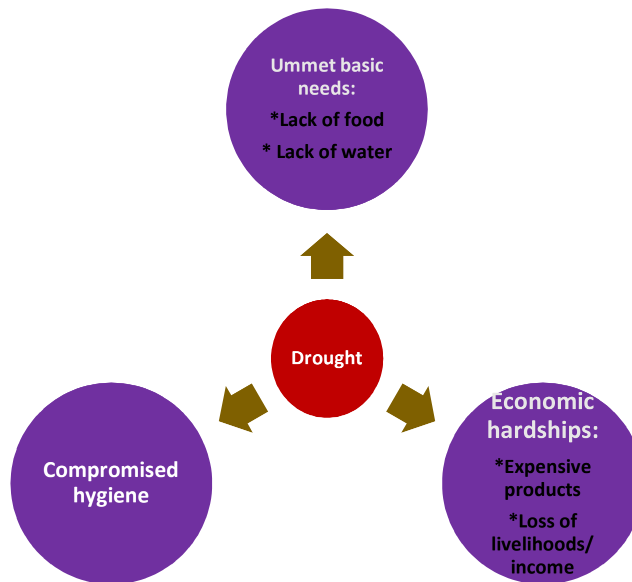

Figure 4.1: Visual summary of themes and subthemes – the aspects of drought young adults find difficult to deal with

4.2.1.1 ***Theme 1: Unmet basic needs***

Unmet basic needs refer to physiological needs that are necessary for human survival but that are not sufficiently provided. During drought, basic resources like food and water are usually insufficient, and in line with this, the sub-themes ***lack of water*** and ***lack of food*** emerged.

Young adults in Leandra explained that having insufficient water during drought was difficult for them. Participants reported that it was really difficult to survive without water as water is essential for both human beings and animals. Wendy (G8), a female young adult, explained that most human activities need water, thus without water, it is difficult to survive. *"What I can see about how water affects us, that water is a very important part of many human activities we need water to wash, we need water to cook, to bath."* These young adults also pointed out that lack of water has a more serious impact in rural areas. As Solomon (G5) stated, *"… people in the rural areas are the most people who are suffering because of the drought because they are depending on water that is from the river and they end up not getting the water".* This lack of water also meant that young adults had to start saving water and they found it difficult to adjust to using less water. For example, Jabulile (*G5)* said: *"We find it difficult because we used to waste water and now we have to save water so it's really difficult and we are still learning to save water even now."*

Lack of water as a threat in drought contexts is highlighted in studies by Myeyiwa et al. (2014), which focused on the impact of climate change on women living in rural areas in South Africa.

Their study focused on the resilience of women only and included both adult and young women in a context of climate change (hence also floods). Although the study also reported that a shortage of water is a risk because it increases the work load for women, it differs from my study which focused on the resilience of both male and female young adults in a context of drought.

Participants mentioned that there was little or no food during drought. This ***lack of food*** applied to both human beings and animals. Solomon (G5) explained that lack of food might even result in death of animals, *"… and then you are finding animals that are dying because they don't get food".* Wendy (G8) stated that this lack of food could sometimes lead to starvation. "*That way it affects us as a family, because we perhaps in future may suffer from starvation*." She went on to explain that lack of food often has an impact on nutrition. "*And some suffer from lack of nutrition in their body."*

This sub-theme corresponds with the South African and international resilience literature that associates threats to the resilience of adolescents with inadequate nutrition (Myeyiwa et al., 2014; Ortabag et al., 2011; Tirado et al., 2015; UNICEF; 2014). Similar to my study, some of these earlier resilience studies included young adults living in rural areas (Myeyiwa et al., 2014; Tirado et al., 2015). However, none of them focused on young adults.

4.2.1.2 ***Theme 2: Compromised hygiene***

Young adults in Leandra felt that sometimes drought leads to compromised hygiene, in other words practices that are not hygienic during drought and that can be detrimental to people's health. Girl (pseudonym) (G5), a female young adult explained that they have to use little water when bathing. "*Most of the time here when drought affects us we have a shortage of water we have to learn how to save water. Most of the time we use little water when we need to bath."* Some participants mentioned poor sanitation in general. This concern was also highlighted by Wendy (G8), who stated that lack of water can even lead to change of bathing habits. "*So when there is an unavailability of water you find that you have to bath once a day and some of us we like to bath twice a day. Like, when have some problem."*

This theme aligns with the theme of poor sanitation as a threat to the resilience of young people during drought which was highlighted by Myeyiwa et al. (2014), as well as Tirado et al. (2015). Compromised hygiene is associated with ill-health and resilience studies show that ill-health is a threat to young adults (Burt & Paysnick, 2012; Tirado et al., 2015; Zuckerman, DeVine & Holmberg, 2011). Though my study involved a mixed gender group, only female participants mentioned poor hygiene as a drought-related threat. In my opinion their concern possibly related

to menstruation and how menstruation heightens the need for heightened hygiene (for example, two baths per day).

4.2.1.3 Theme 3: Economic hardship

Economic hardship is a given during times of drought. Lack of water leads to agricultural products failing and food prices going up. Thus, the economy is affected during drought. When workers get retrenched, the situation is exacerbated. Two sub-themes emerged, namely expensive products and job losses.

The sub-theme ***expensive products*** is defined as the high pricing of products. Willem (G5) stated that things become expensive during drought *"…where farmers lost a lot of money and things were expensive".* Solomon (G5) supported this point by explaining about inflation during drought. "*Things were expensive. When you get to the shop you find that the things that you used to buy … they added 100% and you find that you are now buying it at R200 instead of getting it at R100."* Wendy (G8) complained that hiked food prices resulted in people not being able to afford healthy food: *"...the prices of food have increased and people cannot afford particular foods, especially the healthy food".*

Participants in my study also emphasised job loss as a result of economic hardship. ***Loss of livelihoods/income*** as a sub-theme here refers to actually losing a job or the loss of livelihood, for instance farmers losing their livelihood because of poor rainfall or lack of water. Job losses during drought was usually mentioned in relation to farm workers. Solomon (G5) explained how his family lost their livelihood because of drought. The family had to adjust by managing their drought-related challenges. "*We had financial constraints because we were depending on the business he* [participant's father] *was running. And I found that the farm was supposed to be closed and he had to sell the farm so he could buy a less farm and have money to carry on with the business.*" Wendy (G8) also explained that drought causes some people to lose their jobs. "*And you find that sometimes (farms) may close down because there is no water to plant and some people may lose their jobs and they can no longer provide for their families because some suffer from starvation."* The sub-theme of ***loss of livelihoods/income*** is reiterated by Tshepo (G8), a male young adult, who stated "*…employees can lose their jobs, cannot maintain their families".*

Inflation and job loss constituted a recurrent threat theme in most of the Australian resilience studies (Carnie et al., 2011; Dean & Stain, 2007; Kelly et al., 2011; Ng et al., 2015). Some South African studies also cite unemployment as a threat to the resilience of young people (Mosavel,

2015). However, none of the South African resilience studies have focused on the resilience of young adults in a context of drought. It is my hope and contention that my study therefore makes a tentative contribution to the South African resilience literature.

4.2.2 What supports resilience in the young adults?

The themes that emerged about what supports resilience in the young adults challenged by drought were grouped according to the different support systems, namely the individual him-/herself, the family, and the community. Figure 4.2 is a visual summary of the themes and sub-themes that were found to support resilience in the young adults of Leandra.

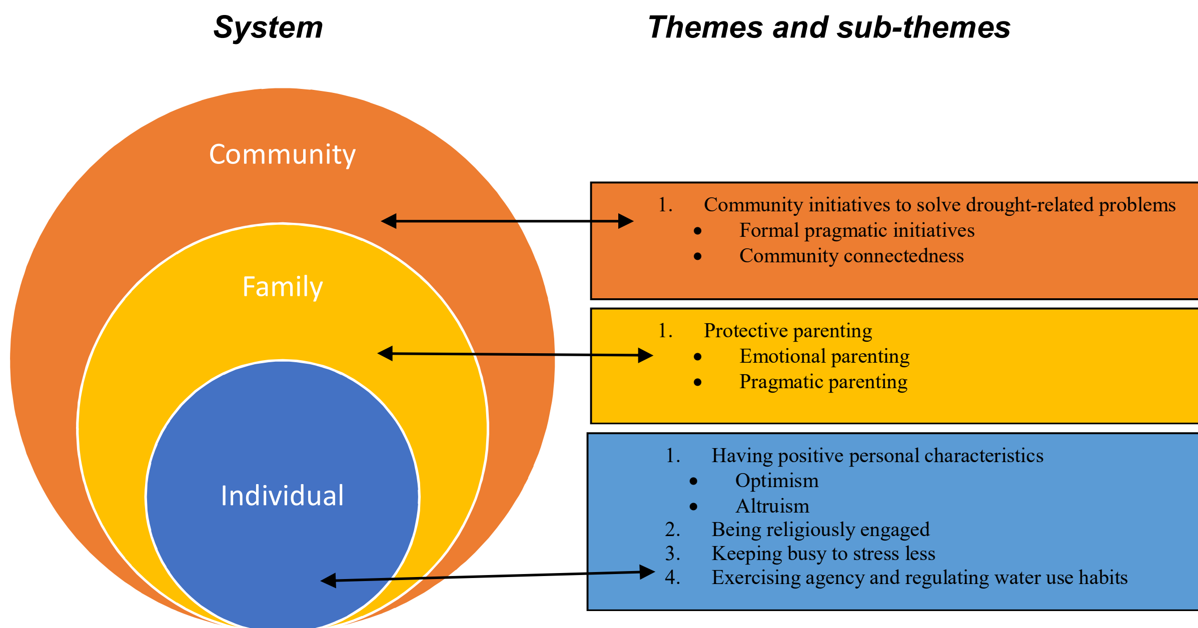

Figure 4.2: Visual summary of resilience enablers for young adults of Leandra

4.2.2.1 ***Individual system***

Within the individual system, I identified four themes of resilience enablers, namely positive personal characteristics, religious engagement, keeping busy to stress less, as well as exercising agency and regulating water use habits. Next, I will discuss each individually by explaining the sub-themes and giving examples of sub-themes from the data.

Theme 1.1: Having positive personal characteristics

I defined the individual's positive personal characteristics as his/her ability to focus on the positive side and make good choices when faced with adversity (drought). Positive personal characteristics include two sub-themes, namely ***optimism*** and ***altruism***.

Optimism is defined here as thinking positively, accepting the reality of drought and making positive meaning from the drought. The participants explained that they remain focused, keep positive thoughts and are hopeful about the future. Jabulile (G5), one of the female participants, explained how she focused on achieving important things in life in order to deal with drought. "*I set my mind to focus on achieving big things in life, like talking to people about my job and learning more about drought and get information about what is happening and learn what about what you should do when there is a drought."* She went on to say that it is important to prioritise and take responsibility of important matters like saving water. "*It's important to prioritise in life, there are things that come first in life like saving water and taking responsibility for the things that matter the most like water."* Wendy (G8) also mentioned that she thinks positively. *"I'm always thinking positively."* (See Photo 4.1.) Tshepo (G8) agreed and stated: "*Obviously to adapt to the drought … I think positively.*"

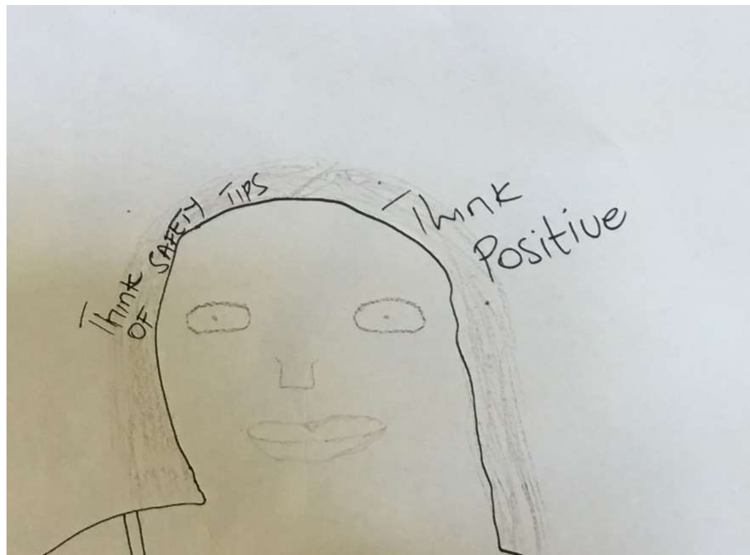

Photo 4.1: Part of Wendy's body-map with "think positive" as a way of enabling resilience during drought

Local studies cite optimism and hope as spiritual or motivational characteristics of adolescents and young adults that enable resilience in these young people (Collishaw et al., 2015; Ebersöhn, 2013; Ebersöhn et al., 2015; Hills et al., 2016; Lethale & Pillay, 2013; Mohangi et al., 2014; Van Breda, 2017). However, none of these South African resilience studies were done in the context of drought. Thus, in showing that young adults who are challenged by drought also report optimism, my study extends the contexts of risks in which optimism is resilience-enabling.

Altruism, which I define as selfless regard for the well-being of other people, also emerged as a sub-theme supporting the resilience of young adults who experienced drought in Leandra. Altruistic activities mentioned by participants included volunteering, giving food parcels to others and helping the needy. Solomon (G5) explained that he does introspection on how he can be of assistance in his community. "*Self-introspection about what I can do or add in order to overcome the drought and what input I can put into the community and things I can do in order to assist in the community."* Participants mentioned helping their neighbours, as is seen in Wendy's (G8) statement: "*Most of the time I help my neighbours*." Palesa (G8), a young female adolescent, also mentioned how she helps her neighbour: "*And I love to help needy and poor people … There's this other person who lives near at our house she's so poor. She has 5 kids and like sometimes we have to go a long distance to fetch water … I just get a bucket of water and like go and bring it to her home… playing with her kids, stuff like that yeah*."

Altruistic propensities were cited in literature as resilience enablers for young people in South African communities (Mosavel et al., 2015; Ogina, 2012; Theron, 2017). However, this literature did not deal with studies conducted in a drought context. Hence, my study may well make a contribution to the body of South African resilience studies.

Theme 1.2: Being religiously engaged

Being religiously engaged is another sub-theme that emerged from the individual system as supporting the resilience of young adults in a context of drought. It refers to engagement in all kinds of religious activities for young adults in order to cope with drought-related challenges. Many participants reported that they engaged in activities that related them to God, like praying. This is seen in Photo 4.2 which shows the words *"pray to the Lord"* written next to the cross inside the body-map of John, a young male adult. MaFashion (pseudonym) (G8), a male young adult also explained that praying and singing to God help him to be resilient during drought. "*Know what helps me in my heart is … praying to God and in my heart is singing to God it helps me to, to relieve everything*." Girl (pseudonym) (G5) mentioned that she prays and has faith that the drought will pass. "*I believe that God can change any situation, so I keep praying and having faith that this shall pass because everything does pass."*

Religious engagement was cited in many resilience studies among South African adolescents and young adults as enabling resilience for young people in various contexts (e.g. Collishaw et al., 2015; Malindi, 2014; Malindi & Theron, 2010; Mohangi et al., 2011; Pienaar et al., 2012). Religious engagement is a strategy through which young people are able to make meaning of the

adversity experienced during drought. Believing in God helps them to be hopeful about the future. Thus, during drought, their faith in God might also alleviate helplessness.

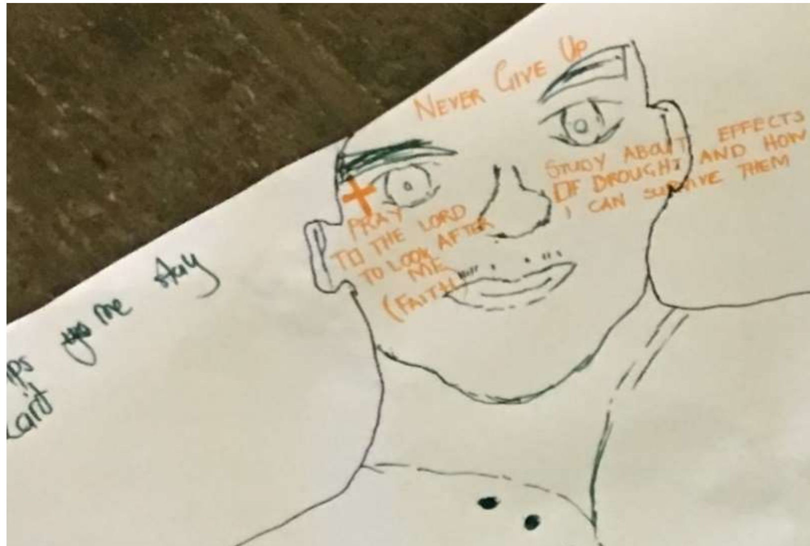

Photo 4.2: A body map by John explaining that praying to God keeps him healthy during drought

Theme 1.3: Keeping busy to stress less

When young adults keep themselves busy to stress less, they make use of activities to distract themselves from focusing on the drought. These can include recreational or sporting activities and engaging with social media. Many of the participants mentioned being involved in activities like reading, music, singing, dancing, sports, social networking and watching television. MaFashion (G8) drew a sign that represents music inside the heart on his body-map (see Photo 4.3) and explained that singing helps him stay healthy during times of drought. Willem (G5) explained how he uses his hobbies to distract him from focusing on drought and thus they enable resilience for him. "*Willem is just a normal guy who loves music, who always listens to hip-hop and some of the lyrics, write them himself. He also plays chess… he used to play in tournaments… and also [likes] reading books, stories …Yeah it takes my mind off what this that is happening…"* In the same manner, Girl (G5) explained that singing, dancing and shopping reduce her stress levels during drought. "*I love singing. Singing makes the heart [healthy]. I enjoy singing and also by jogging and dancing, that keeps the stress levels lower …and also going shopping. Shopping makes everything alright* [laughing] *as a girl...."*

Photo 4.3: MaFashion's body-map showing music as a way of staying healthy during drought

This theme of keeping busy can be related to escape techniques, which were identified by Hills et al. (2011), as enabling resilience in street children. However, methods of escaping mentioned for the street children in this study varied from the ones used by young adults in my study. The street-connected youth were more likely to use atypical methods like drinking and smoking glue to avoid thinking about their situation. Engaging in the types of activities mentioned by the young adults is probably linked to the availability of recreational opportunities. Availability of recreational opportunities was cited by Malindi (2011), as enabling resilience. These recreational opportunities can include infrastructure like soccer pitches and community libraries where young people can engage in activities that keep them busy.

Theme 1.4: Exercising agency and regulating water use habits

In this sense, agency is when young adults try to find solutions or manage the challenges that they face when there is drought. Regulating water use habits involves self-control when using water during drought. Thus, when young adults employ various strategies of saving water like using a cup when brushing their teeth, they are regulating their water use habits. My study identified solution-focused ways that show that the young people of Leandra have agency and do not just sit and do nothing when faced with challenges. The young adults cited that access to

information enables them to have agency. John (G8) explained how the weather forecasts enable him to prepare during drought. "*…then also following news and weather forecasts which tells me what's going on. Which tells me how I should prepare myself for things."* Solomon (G5) explains how he finds solutions by thinking out of the box. "*Find a way to think outside of the box …, you will have some solutions to resolve those challenges. Perhaps you won't reduce all the challenges in the current point of time but surely you will reduce maybe 10% of the situation."* MaFashion (G8) explained how he uses water wisely in order to stay healthy during drought. "*What helps me to stay healthy in my body is … to use water wisely. Reusing bathing water to flush toilets, using a cup to brush my teeth, bathing once a day, boiling the delivered water before using it. Boiling the amount of water that I'll be needin*g." John (G8) also explained how he saves water when flushing the toilet. *"So if I put a brick I have now reduced maybe two litres of water that you supposed to throw away. Then you flush your toilet with small water. That's saving water."* All these techniques reflect self-regulation and serve as a way of effecting change with regard to water use so that resilience is enabled during drought.

In numerous studies, agency and self-regulation have been noted to be resilience enablers for young people in South Africa (e.g., Ebersöhn, 2013; Ebersöhn et al., 2015; Hall & Theron, 2016; Malindi & Theron, 2010; Mampane, 2014; Theron & Malindi, 2010). None of these earlier studies were conducted in South African drought contexts, and so – as reported in the earlier themes – my study confirms that agency and self-regulation also help to create resilience to drought. Contrary to this finding, Carnie et al. (2011), mention barriers to accessing services, which in my opinion can hinder agency. For example, one cannot save water unless it is there from the beginning.

4.2.2.2 2 *Family system*

Theme 2.1: Protective parenting

One theme emerged in the family system, namely protective parenting. According to Donohue and Piironien (2017), the survival of children in the family depends on protective parenting. They define protective parenting as parents who care for their children so that the latter are protected from harmful effects in the environment. Protective parenting as a theme was further broken up into two sub-themes: ***pragmatic parenting*** and ***emotional parenting***.

The young adults mentioned the benefits of emotional parenting. ***Emotional parenting*** takes place when older family members support, protect or encourage the younger family members; when they teach or encourage cultural beliefs, as well as distract the thoughts of these young

people from the negative impact of drought. Solomon (G5) noted that his parents made sure that he and his siblings were not exposed to drought. "*Our parents make sure that we are not exposed to these situations even though they affect us, but they make sure that we are being protected and they make sure that they do something that will take our minds from this and say 'Hi my son or my daughter, it's going to be alright."* Jabulile (G8) however explained that emotional parenting was gender related. She explained how her parents spoke differently about issues of drought to their male and female children. *"They speak to us differently. If I was a guy, they would say in a tough [voice] "you see plants are dying" "this and that is dying" But then to us [girls] they will say to us like, "ah my kind (Afrikaans word for child), crops are dying" (soft voice) you know like, they don't want us [girls] to worry so much."* This relates to the cultural belief that women are delicate and need to be treated so.

In one instance, there was mention of pragmatic parenting. ***Pragmatic parenting*** is defined here as instances where any member of the family facilitates access to resources or role models on how to manage practical aspects of drought for the young adults. MaFashion (G8) reported that their parents fetched water for them. *"There is water but there is not much water; our parents use their cars to go fetch water to make sure that we have water."*

Protective parenting relates to family support. Family support has been noted as enabling resilience to adolescents and young adults in South African studies (e.g., Choe & Zimmerman, 2013; Colloshaw et al., 2013; Deist & Greeff, 2017; Ebersöhn & Bouwer, 2013; Ebersöhn & Bouwer, 2015; Hall & Theron, 2016; Mampane, 2014; Nkosi & Daniels, 2007; Theron, 2015; Theron et al., 2011; Theron et al., 2013). However, none of these South African studies were in drought related context. My study addresses this gap and therefore might make a contribution to South African resilience literature in this regard.

4.2.2.3 Community system

Theme 3.1: Community initiatives to solve drought-related problems

One theme was identified for the community system, namely ***community initiatives to solve drought-related problems***. Two sub-themes that emerged from it are ***formal pragmatic initiatives*** and ***community connectedness***.

Formal pragmatic initiatives include efforts by community-based formal structures like non-governmental organisations (NGOs) and community-based government structures (such as schools and clinics) to assist communities in managing drought-related challenges. Young adults reported initiatives by the municipality and Solomon (G5) explained that the municipality gave out

pamphlets to community members. *"The municipality has tried to make pamphlets to give to people, informing them if they are misusing water."* MaFashion (G8) stated that the municipality brought in water tanks during the drought. *"Even the municipality because they deliver water using those tank trucks so they are also contributing."*

An example of ***community connectedness*** is when people in the community come together and unite as they are involved in joint activities like negotiating with the municipality. Girl (G5) noted that people in Leandra gave each other support. "*My neighbours and the community keep each other strong during hardship, when you are united, we can overcome anything because we all are facing this situation.*" Willem (G5) also stated that community members stuck together during drought. "*They come together, they stick and stand together then talk to the municipality. When there is a drought in the community, ah they stick together…*"

A number of earlier South African resilience studies cited community support as enabling resilience for young people (Choe & Zimmerman, 2012; Mampane, 2014; Pienaar et al., 2012; Theron & Malindi, 2010; Theron & Theron, 2010; Wild et al., 2011). This support came in various forms. However, as noted previously, none of these studies were conducted in a drought context and with a specific focus on young adults.

4.3 CONCLUSION

Three systems were recognised as enabling resilience for young adults in Leandra – the individual, the family and the community. No themes in respect of macro systems emerged. Young adults did not mention policies and other governmental initiatives – either because the young people of Leandra were not aware of government or global initiatives during drought, or because the initiatives were lacking. This silence in my data corresponds with the fact that in my literature review, only one study (Thomas, 2008) mentioned macro systems (i.e. government initiatives like debt forgiveness, crop insurance and direct food aid) as enabling resilience during drought. Caldwell and Boyd (2009), in turn only gave recommendations of what the government should do during drought.

The individual system had four themes, which exceeded the number of themes in the other systems. This might mean that as much as resilience has a bi-directional relationship with the individual and the social ecology (Ungar, 2011), from the perspective of the young adults who participated, the impetus remains with the individual to navigate towards the resources the community has to offer. However, I simply cannot downplay the role that the family and community

play in enabling resilience. Thus, the individual and the social ecology have to relate to one another for the young adult to be able to resile in the face of drought.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter concludes my study. I will first revisit my research questions, acknowledge the limitations to the study and report on the personal insights I gained from the study. Finally, I wish to make recommendations for future research as well as for educational psychologists.

5.2 RESEARCH QUESTIONS REVISITED

The primary research question, “How do the young adults of Leandra explain their resilience in a context of drought?” was linked to the following sub-questions: “Which aspects of drought do the young adults of Leandra find difficult to deal with?” and “What supports the resilience of young adults in Leandra?” As explained in the definition of resilience in Chapter 1, for resilience to occur, there must be adversity and resilience enablers (Masten, 2004; Ungar, 2011). In this study, drought was the condition of adversity that the young people found difficult to deal with. The resilience-enabling factors identified by the young people emanated from the individual, family and community systems.

Figure 5.1 provides a detailed summary of the findings in respect of the sub-questions raised in my study. According to the young adults of Leandra, there is not enough water available during drought and food prices escalate; this situation then gives rise to people being retrenched from their jobs or losing their livelihoods. The young female participants felt that insufficient water led to poor sanitation, which affected their personal hygiene and potentially their health. All these were aspects of drought that the young people in Leandra found a challenge to deal with. The threats related to drought had an impact on all the systems because, as shown by the green arrows in Figure 5.1, the systems are interdependent and influence one another. For this reason I depicted their borders as permeable. The individual is part of the family and the community, in as much as the community is made up of individuals and families. However, these young people went on to explain that even though drought has elements that are really difficult to deal with, there are factors in the different systems that help them to be okay. Individually, the young adults cited factors such as their hope, positive attitude, faith and belief in God, helping others, doing activities that they enjoy so as not to focus on drought, imagining and effecting change, as well as adjusting their habits of using water. Family support, was mostly seen in support from the parents and in the community when the members stood together united as well as having support

from formal organisations, especially the municipality. Hence, the intrapersonal (individual) factors and the social ecological factors were found to work together to enable resilience for the young people despite conditions of severe drought (Ungar, 2011).

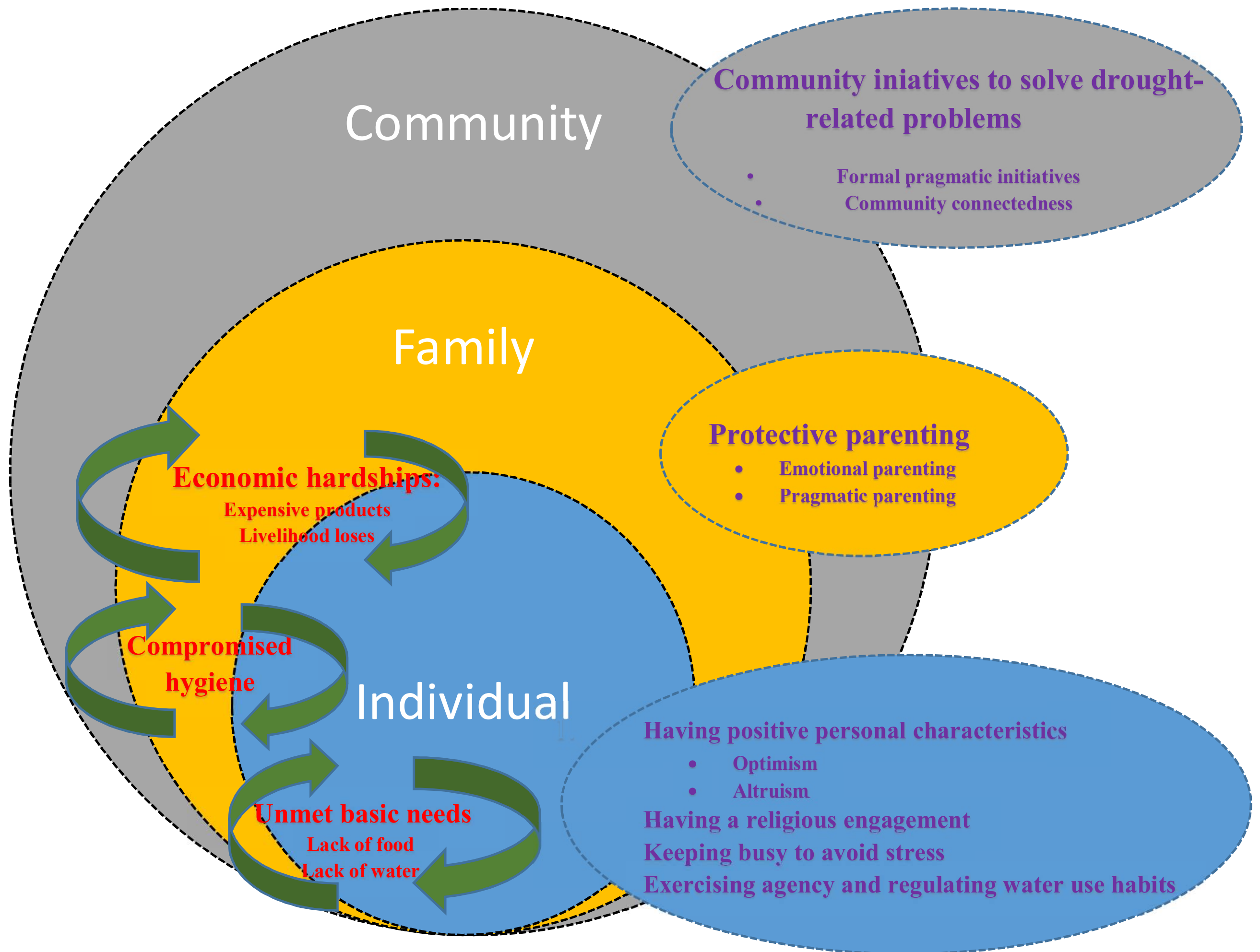

Figure 5.1: A visual summary of the findings

Taken together, the above findings support the following answer to my research question: Drought is a threat to the well-being of young adults in Leandra. However, the young adults do not just sit helplessly when faced with drought. As theorised by SERT (Ungar, 2011), the young adults in my study draw on personal resources (i.e. positive characteristics, religion and constructive initiatives) as well as social ecological resources (i.e. parents and municipal workers) to cope well with drought.

5.3 LIMITATIONS OF THE STUDY

I identified a number of limitations to my qualitative study, the first of which had to do with the methodology I selected. As this study was phenomenological and exploratory in nature, the generalisation of the findings was limited (Creswell, 2013; McMillan & Schumacher, 2014). However, because the purpose of the study was rather to explore and gain an understanding of how the young adults of Leandra explained their resilience than to generalise the findings, this limitation was not serious.

Other limitations had to do with working in groups, data collection methods, language and duration of the study. Some of the group participants rarely participated. These silenced voices could probably have made rich contributions if different methods had been used, for instance individual interviews and journals. Also, the use of arts-based methods could have made those who felt incompetent to draw hesitant to contribute, even though the facilitators followed the advice of Mitchell, Theron, Stuart, Smith and Campbell (2011), and reassured the participants that artistic competence was not necessary. Although one of the recruitment criteria was that the potential participants should be conversant in English, some of the participants' competence in English was limited. This might have affected their level of participation in the discussions. Some discussions took place in their home language and when reporting in English to the facilitators, some of the data mentioned in the home language could have been left out. The fact that the data was collected on a single day could also have limited the amount of time participants had to think over the questions carefully, thus limiting the quality of data collected. This relates to the criticism (cited by Theron (2016), levelled at resilience studies that mostly use cross-sectional designs.

The research facilitators were students who, like myself, mostly had limited research experience. This could have affected the quality and depth of data that was collected. Even though we received training, some of us were still anxious and nervous during the data collection process (as confessed during one of the debriefing sessions).

As mentioned at the start, my study was part of a greater project; thus, I had no control over many aspects of the project. For example, though I collected the ages of the participants I was working with in the group I facilitated, the other facilitators who worked with the young adult groups for my study did not request the ages of the participants in these groups.

5.4 REFLEXIVITY

Reflexivity is defined as "the process of an internal dialogue and critical self-evaluation of researcher's positionality as well as active acknowledgement and explicit recognition that this

position may affect the research process and outcome" (Berger, 2015, p. 219). The researcher's positionality could include aspects like race, age, gender, language, personal characteristics and emotional responses to participants. According to Berger (2015), the researcher's positionality can affect research in three major ways. Firstly, his/her positionality may affect access to the field. Secondly, it may shape the nature of the researcher – researched relationship, which in turn, affects the information that participants are willing to share. Lastly, it may shape the findings and conclusions of the study due to the worldview and background of the researcher. Reflexive engagement should take place throughout the research process – from planning, conducting and writing about the research – in order to promote a continuing "recursive relationship between the researcher's subjective responses and the intersubjective dynamics of the research process itself" (Probst, 2015, p. 39).

5.4.1 Reflexivity as a post-graduate student

As a postgraduate student, I am expected to do research. Though working in a greater project and having had no control over its limitations, I believe it also had great benefits. Working with seasoned principal investigators made the research process a whole lot easier than if I had worked on my own. We (my co-researchers and I) were given training on data collection methods and coding – important skills that will always assist me in my academic and research career. This was not my first time working with participants on research, but it was first time that I used visual data collection methods. Though the use of visual data collection methods had a limitation, it made working with young adults easier and provided far richer stories compared to when I worked in a research project based on structured interviews (compare Theron (2016)).

I grew up in a rural area where drought was rampant. As mentioned by Berger (2015), researcher familiarity of the phenomenon sensitised me to the issues with which the young adults dealt during drought. I nevertheless realised that the rural context in which I grew up was totally different from the rural context in Leandra. According to Statistics South Africa (n.d.), more than 90% of the Govan Mbeki municipality have access to tap water and a functioning sewerage system. This was totally different from the rural context where I grew up, where there was no tap water or sewerage system and our village had to rely on boreholes and rivers that would dry up during drought. I was not judgemental to the experiences of the young adults in Leandra as I knew that I had experienced drought was when I was much younger than the participants. However, I was aware of my subjective experience of drought and purposefully approached the information from young adults of Leandra with an open mind.

5.4.2 Reflexivity as an Educational Psychology student

As an educational psychologist in training, I learnt quite a bit from the research process. The collaborative nature of the research process kept the adolescents and young adults engaged. Thus, when working with clients, I will always keep in mind that collaboration balances the position of the client and the therapist. For example, during the research process, participants were given an option to choose what method they would like to use in the first activity. This gave the participants power during the research process. In the same manner, when working with clients in the future, I should also give them opportunities to make choices for themselves when it is relevant. Such an attitude is likely to enhance the therapist-client relationship and might assist in building trust between the therapist (me) and the client. Though my reflection is echoed in recent literature (e.g. Theron, 2016), this first-hand experience made the published advice to educational psychologists more convincing.

From the results, I deduced that the different socio-ecological systems are important in building resilience in young adults. This will also assist me when I work with the systems that affect the individual – both in understanding the risks and the resilience-enabling resources of the client as noted by Theron and Donald (2012). Thus, I will not focus only on the individual as is often the case in psychology (Becvar & Becvar, 2014).

5.1 RECOMMENDATIONS

5.5.1 Recommendations for future research

As my study was exploratory, it paved the way for future research. I would recommend a mixed methods research design as this type of design would provide more comprehensive data (McMillan, Schumacher, & Hearn, 2014). This would also give room for generalisation (if required). Even if the study was to remain qualitative in nature, I would recommend that demographic information be collected via a short self-report survey so that rich descriptions of participants may be provided.

I would also recommend the engagement of both individuals and groups, as this would engage participants who are comfortable to participate individually as well as those who feel more secure in groups. In the individual studies, methods of collecting data could still include visual participatory methods and other methods such as interviews and journal writing. Journal writing could take place over a longer period of time in order to allow participants space to make rich reflections on drought in their lives – compared to the one-day period they had for my study. In addition, English competence would have to be verified, or otherwise participants could use their

own preferred languages and translations could be made where English was not used. Another option would be for the researchers to let participants use their home language and to have translators translate the communication to English. However, Theron (2016), explained that translations had their own limitations, as translators might use their own wording and at times participants could use concepts that translators might find difficult to translate.

Adding to the above recommendations, I would also encourage that research be done in a community currently experiencing drought. Though Leandra was declared a drought area in 2015, by the time we did our study in April 2017, the community was no longer experiencing drought. This could have had an effect on the information that was being reported as the drought was already in the past.

When using inexperienced co-researchers, one could partner them with experienced researchers to allow them to gain experience in the research process. The experienced researcher could just be there to guide or assist as the co-researcher leads the facilitation. The experienced researcher could then leave the facilitator to work with participants after having ensured that the facilitator is on the right track.

5.5.2 Recommendations for educational psychologists

The *Lancet* recently published an article that proposed that the definition of adolescence should be adjusted to span the period from 10 to 24 years of age, citing that the transition from childhood to adulthood is now taking longer. Young people nowadays are career focused and take longer to settle down and marry (Sawyer, Azzopardi, Wickremarathne & Patton, 2018). Educational psychologists who work with young adults aged 20 to 24 years should bear in mind that there is a move to extend adolescence to the age of 24 years. If educational psychologists were to support this move, it might ease the pressure on young people to take on adult roles (such as employment), especially when drought jeopardises the fulfilment of these adult roles.

As can be seen in Figure 5.1, the various systems that the young adults are part of have different roles in enabling resilience. Educational psychologists will therefore need to work holistically with young people so that all these systems are involved. This view is supported by Pillay (2012) as well as Theron and Donald (2012), who noted that educational psychologists need to work from an eco-systemic perspective in order to be of value to young people who are facing different adversities in their lives. Thus, when assessing risks for the young person (including young adults who are drought-challenged), the educational psychologist will have to look at risks across all the systems. The same will apply when assessing the resources available to these young people.

Mazza and Overstreet (2000), noted that identifying at-risk youth and helping them to develop coping strategies and increase self-esteem are important roles to be fulfilled by educational psychologists. However, in rural communities such as Leandra, educational psychologists are not easily accessible. Theron and Donald (2012), recommend that in such situations educational psychologists need to play a consultative and educative role, as well as promote the development of resilience champions. In the context of Leandra, educational psychologists could mobilise community members who can use culturally meaningful ways to work with young adults and enhance their resilience. Flowing from my findings, educational psychologists are advised to include municipality staff in programmes or initiatives that facilitate resilience for young adults.

The scope of practice for educational psychologists mention policy development as one of the tasks of educational psychologists. The young adults reported that unmet basic needs make it difficult for them to cope during drought. Educational psychologists are well placed to develop policies (see McLoughlin & Kubick, 2004), on which the government and global world could work together to ensure that young people who attend school (tertiary education) get water and food at school. This would ascertain that these young people do not drop out of school because of lack of food and water, and that their opportunities in the career world are not jeopardised during young adulthood.

5.5 CONCLUSION

Figure 5.2 (Kuropatwa, 2013), is an attempt to show how the young adults of Leandra explain their resilience in the context of drought. Adversities like drought in Leandra have brought people together and they managed to come up with initiatives to solve their problems. The picture is a reflection of the religious engagement as well as the optimism cited by young adults as enabling their resilience during drought. However, these are individual resources that drive young adults to have hope about the future. As proposed by the Social Ecology of Resilience Theory (SERT) (Ungar, 2011), the individual and the social ecology need to partner. This partnership should involve “all villagers”. Educational psychologists in particular need to maximise both individual and socio-ecological resources to champion the resilience of young adults challenged by drought.

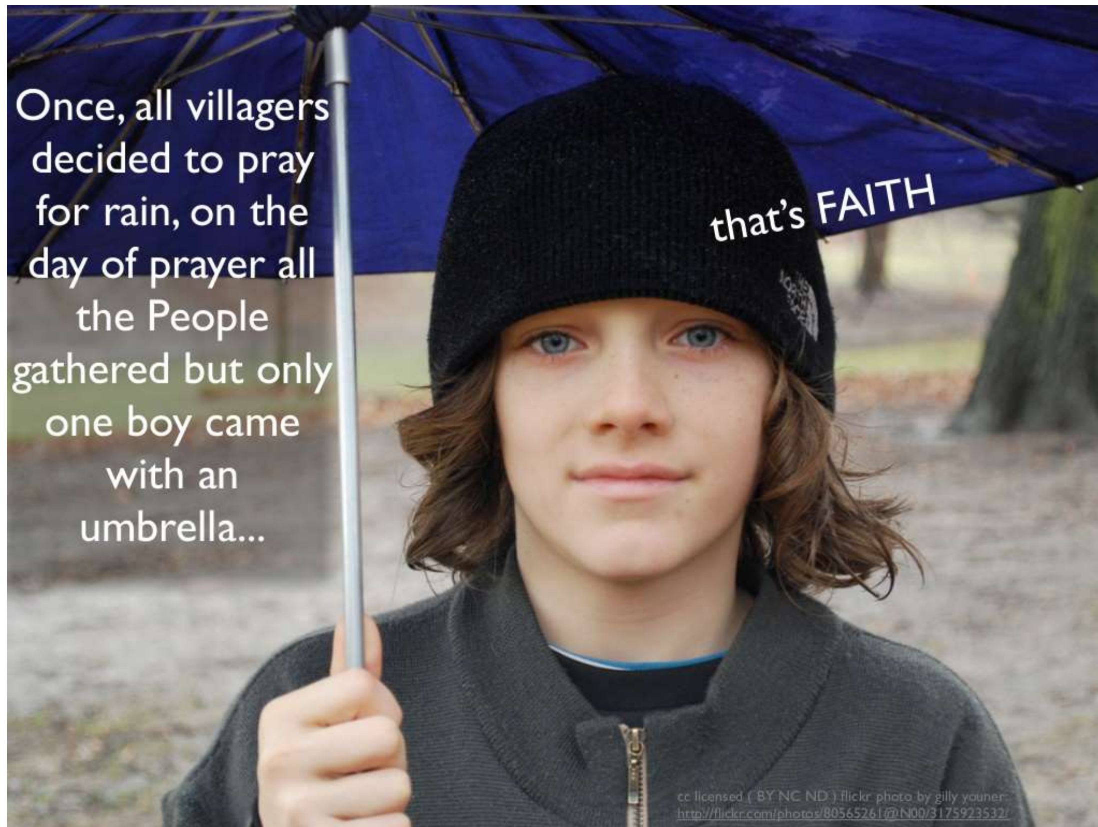

Figure 5.2: A picture showing the faith of a young person during drought (Kuropatwa, 2013)

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LIST OF ADDENDA

Addendum A:	**Audit Trail**
Addendum B:	**Informed Consent**
Addendum C:	**Ethics clearance certificate for greater project**
Addendum D:	**Ethics clearance certificate for my study**
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ADDENDUM A:

AUDIT TRAIL

ADDENDUM A - AUDIT TRAIL

Excerpt illustrating open coding process

The table which follows links to the highlighted sections

First sub-question: Which aspects of drought do the young adults of Leandra find difficult to deal with?

Group 5, Activity 1 – Draw and write technique

P1: For me, drought has also affected us as a family because my father is a person who is a farmer, a person who has an agricultural farm and then last year, maybe in November…Uh or June we found that some of the cows that we had on a farm were dying and others didn't t getting survive. What you call...yoh... I'm shaking and I don't know why…

F1: haha don't, relax

P1: I don't know for I've been doing this a long time, my knee has a problem... We [lost] some of the goats and some of the crops, because he had crops and the maize meal and all those things. Then people that he was supplying, they didn't get the products that they needed and then the business started to, eh run out of money. The worst part of it is he became sick and we lost. We had financial constraints because we were depending on the business he was running. And I found that the farm was supposed to be closed and he had to sell the farm so he could buy a [smaller] farm and have money to carry on with the business.

F2: Wow, thats quite a big knock on effect…

P3: Most of the time here when drought affects us we have a shortage of water we have to learn how to save water. Most of the time we use little water when we need to bath. And most of the time our neighbours have veggies, they don't grow, so, they have to make other means to make money to get food because most of the time. Here mostly we are affected by agriculture drought...

Line	Open codes	Axial codes	Emerging themes
3-4	Animals dying on farms	Loss of livelihood/income	
7-9	Crops and goats dying	Loss of livelihood/income	
9-10	Business loss	loss of income	Economic
10-11	Sickness due to stress	(dropped)	hardships
11-14	Business loss	Job loss (loss of income)	
16	Shortage of water	Lack of water	Economic
16-17	Save water	Lack of water	hardships
17	Poor hygiene	Compromised hygiene	Unmet basic needs
17-19	Vegetables not growing, Lack of money to buy food	Lack of food	Unmet basic needs Compromised hygiene Unmet basic needs

Inclusion and Exclusion criteria for axial codes

Axial code	Inclusion criteria	Exclusion criteria
Compromised hygiene	Where participants had to change hygiene habits because of lack of water /drought.	Change of hygiene habits which is not due to lack of water or drought.
Lack of food	Instances where participants mentioned restricted access to food or having to skip meals or even rationing food during drought because there was not enough food available.	Instances where lack of food is mentioned due to affordability or dieting.
Lack of water	Instances where young people mentioned that it was difficult to survive without water for people and animals, and instances where young adults explained that changing water use habits were difficult.	Instances where participants mentioned water rates being hiked as a means to save water by the municipality.
Livelihood losses	Instances where participants mentioned losing jobs/income	Instances of losing jobs or livelihoods that are not drought related (e.g., quitting

	or their livelihood because of drought.	work or being fired/retrenched).
Expensive products	Instances where young adults explained that food prices became expensive during drought.	Instances of high pricing of products because of other causes besides drought (e.g., loss of value of currency).
Optimism	Instances where participants explained that they kept positive thoughts during drought, were hopeful, remained focused and took responsibility about saving water.	Instances where hope was linked to faith and religion.
Altruism	When young adults mentioned helping others as a way of keeping healthy during drought.	Helping others that is not related to drought (e.g. as a familial duty).
Religious engagement	Instances when young adults turned to faith and religion in order to manage drought related challenges.	Instances where religious engagement was a routine family or community activity that was not done to cope with drought
Keeping busy to stress less	When participants mentioned that they engaged in various activities (from music, reading and sports) as a means of not focusing or stressing about drought.	When young adults engaged in these activities in order to avoid negative peer relationships or other non-drought-related pressures.
Exercising agency and regulating water use habits	Instance where young adults mentioned imagining and effecting change as well as saving water as a way of enabling resilience during drought.	Instances where young adults mentioned saving water habits during drought as being difficult for them.
Protective parenting	Instances where young adults cited activities by parents or elders in the family which supported, guided, distracted, taught them in a way that enabled resilience for them.	Support and guidance from peers and elders which are not family members.
Community initiatives to solve drought-related	Instances where community organisations like the municipality initiated programmes that solved drought-related challenges	Initiatives by the community organisations that were not related to solving drought-related challenges.

	(like sending water trucks to community members).	
Community connectedness	Instances where young adults mentioned community members' coming together while solving drought challenges as enabling resilience for them.	Instances where community members were united but had nothing to do with drought or could not enable resilience for young adults during drought (e.g., community members coming together to strike).

ADDENDUM B:

INFORMED CONSENT

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

PARTICIPANT INVITATION AND CONSENT FORM
(Young adults)

We invite you to participate in a project called: *Patterns of resilience among young people in a community affected by drought: Historical and contextual perspectives.*

Who are we?
We are researchers from the University of Pretoria (South Africa), the University of Brighton (United Kingdom), and two organisations called BoingBoing (United Kingdom) and Khulisa Social Solutions (South Africa). Our contact details are at the end of this letter if you need them.

What are we doing in this project?

We want to learn from you (and about 50 other young people from Govan Mbeki municipality) about what helps young people, whose communities are badly affected by drought, to be resilient. To be resilient is to keep doing OK in life even when life is hard. With your help, we also want to learn what adults in your community know about what has helped your community to keep doing OK in times of drought. Together with you, we want to come up with a plan that will help communities to help young people to be resilient.

The Research Ethics Committee of the Faculty of Education, University of Pretoria has said it is OK for us to do this study (UP 16/11/02). They know we will work carefully using South African and international ethical rules (this is actually called the guidelines and principles of the international Declaration of Helsinki and the ethical guidelines of the National Health Research Ethics Council). The committee will maybe want to look at the forms you sign (if you say yes to being in this study) to check that we did everything in the right way.

Why are we asking you to be part of this project?
Because you

1. Are 18-24 years old, *and*
2. Are OK speaking English and can read and write in English, *and.*
3. Live in the Leandra area, Mpumalanga.
4. Somebody from Khulisa has recommended you as a participant for this project.

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Faculty of Education
Fakulteit Opvoedkunde
Lefapha la Thuto

ADDENDUM C:

ETHICS CLEARANCE CERTIFICATE FOR GREATER PROJECT

Faculty of Education
Fakulteit Opvoedkunde
Lefapha la Thuto

Ethics Committee
13 February 2017

Dear Prof L Theron

REFERENCE: UP 16/11/02

We received proof that you have met the conditions outlined. Your application is thus approved, and you may **continue with your fieldwork**. Should any changes to the study occur after approval was given, it is your responsibility to notify the Ethics Committee immediately.

Please note that this is **not a clearance certificate**. Upon completion of your research, you need to submit the following documentation to the Ethics Committee:

- Integrated Declaration Form (Form D08),
- Initial Ethics Approval letter and,
- Approval of Title.

Please note:

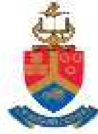
- *Any amendments to this approved protocol need to be submitted to the Ethics Committee for review prior to data collection. Non-compliance implies that the Committee's approval is null and void.*
- *Final data collection protocols and supporting evidence (e.g.: questionnaires, interview schedules, observation schedules) have to be submitted to the Ethics Committee before they are used for data collection.*
- *Should your research be conducted in schools, please note that you have to submit proof of how you adhered to the Department of Basic Education (DBE) policy for research.*
- *Please note that you need to keep to the protocol you were granted approval on should your research project be amended, you need to submit the amendments for review.*
- *The Ethics Committee of the Faculty of Education does not accept any liability for research misconduct, of whatsoever nature, committed by the researcher(s) in the implementation of the approved protocol.*
- *On receipt of the above-mentioned documents you will be issued a clearance certificate. Please quote the reference number:* ***UP 16/11/02*** *in any communication with the Ethics Committee.*

Best wishes

Prof Liesel Ebersöhn
Chair: Ethics Committee
Faculty of Education

ADDENDUM D:

ETHICS CLEARANCE CERTIFICATE FOR MY STUDY



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	CLEARANCE NUMBER: **EP 17/03/03 Theron 17-001**
DEGREE AND PROJECT	M.Ed The resilience of young adults in a context of drought
INVESTIGATOR	Ms Netsai Gwata
DEPARTMENT	Educational Psychology
APPROVAL TO COMMENCE STUDY	23 March 2017
DATE OF CLEARANCE CERTIFICATE	01 March 2018

CHAIRPERSON OF ETHICS COMMITTEE: Prof Liesel Ebersöhn

CC

Ms Bronwynne Swarts
Prof Linda Theron

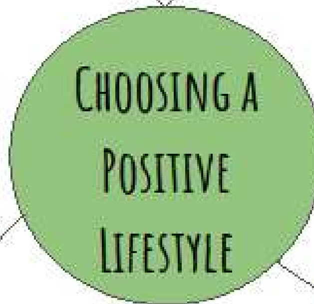
This Ethics Clearance Certificate should be read in conjunction with the Integrated Declaration Form (D08) which specifies details regarding:

- Compliance with approved research protocol,
- No significant changes,
- Informed consent/assent,
- Adverse experience or undue risk,
- Registered title, and
- Data storage requirements.

ADDENDUM E:

POST CONSENSUS CODING POSTERS FOR MEMBER CHECKING

Which characteristics of young people make them resilient to drought-related stress?



Being positive about the future

1. Hope that everything is going to be fine.
2. I like what makes me stay healthy and I'm always thinking positively like what am I going to do like what's next, stuff like that.

Looking at things in a positive way

1. Okay, what I think will help you to be ok when there is a drought: in your heart you have to be calm and in your mind you have to think only positive things
2. You can think of something good that should or could be happening into your life.
3. You know when you wake up there is new hope every day.

Making good life choices

1. And also I am also a Christian. I pray to the Lord to look after me and also I have faith each and every day
1. I also pray and and have faith that this shall pass because everything does pass
2. I talk to Jesus, and if you talk to Jesus you are answered and everything is fine

Thinking bigger than just myself

1. I help old people when they go and collect water in the river or in some other location that is nearby and has water.
2. what can I do or add in order to overcome the drought and what input can I put into the community in order to assist in the community.