

4. METHODOLOGY

The aim of the chapter is to provide a detailed description of the methodology that was used to plan and execute the research. This chapter provides information on the aims, design, participants, materials and apparatus as well as the procedures for data collection and the analysis which allows for the critical review and duplication of the research.

4.1 INTRODUCTION

In the past there has been a disparity between research and the development of theories and actual clinical practices (Kamhi, 1993). Clinicians frequently found that problems which presented in real-life clients were more complex than the solutions being provided through theories and research. Consequently there is currently a greater demand for applied research.

In order for clinicians to apply research findings in clinical settings research needs to be based on real communities, providing real, practical solutions to dilemmas. In this way research and practice would complement each other as advances in one should result in improvements in the other (Robin, 1999). Research could play an important role in providing therapists in the field with information on which to base their decisions (Robin, 1999). Research therefore lays the foundations for informed clinical practice. Research endeavours are, however, frequently undertaken as a result of conclusions and findings from clinical practice (Leedy & Ormrod, 2001). There is, therefore, a reciprocal relationship between research and clinical practice.

This need for research which identifies and meets the clinical needs within specific contexts is met through the use of applied research (de Vos, 1998). Applied research collects situation-specific information resulting in an increase in knowledge and the development of applicable theoretical frameworks and practical solutions which affects service provision within the community (de Vos, 1998). Applied research on the prevention of communication disorders that is based on the real needs of communities will therefore assist therapists within the community to plan and execute prevention strategies.

4.2 CONCEPTUAL FRAMEWORK

The researcher's conceptual framework influences every stage of the project from deciding on the issues to study, to the interpretation of the data. The lens through which the data is considered determines the aspects that are highlighted and discussed, influencing the researcher's conclusions (Denzin & Lincoln, 2000).

A research paradigm represents the overarching philosophy or worldview which is held by the researcher (Denzin & Lincoln, 1998a). This paradigm represents a basic set of beliefs which guide the researcher's actions and which cannot easily be changed (Denzin & Lincoln, 1998a). Paradigms are differentiated on the basis of their beliefs about ontology, namely how they view reality, beliefs about epistemology, namely the relationship between the inquirer and the accepted, as well as methodological decisions (Denzin & Lincoln, 1998a). In this research the constructivist paradigm is adopted.

The constructivist paradigm reflects a belief that there are multiple realities within any context, furthermore, that the researcher is a subjective part of the research process and also that research is set within the natural world, therefore requiring a methodology which is dialectical and allows the researcher to learn from the "real" world (Denzin & Lincoln, 2000; Denzin & Lincoln, 1998a). The constructivist paradigm relies heavily on the interpretive, applying criteria of grounded theory such as trustworthiness, credibility, transferability and confirmability (Denzin & Lincoln, 2000).

This study aimed to develop a tool for parents, for the stimulation of communication skills in infants, which is based on the expressed needs of a specific community. The constructivist paradigm that was adopted in this study means, however, that the content of the tool could not be decided upon by simply statistically analysing the results of a survey (Denzin & Lincoln, 2000). Although statistical analysis was used to identify general trends, information that was only brought to light in one or two questionnaires could not be ignored. The tool should not only reflect the general needs but should also reflect the valuable inputs of the individual participants from varying educational and vocational backgrounds. This also influences the role of the researcher. From a constructivist paradigm the researcher could not be a neutral observer but is viewed as someone who influences the contents of the research process (in this instance resulting in a specialised tool) by making judgements and interpretations (Denzin & Lincoln, 2000).

The interpretation of participants' opinions and the development of a communication tool was a dialectic, transactional process between the researcher and the participants. Research findings were *created* during this process, rather than *discovered* (Denzin & Lincoln, 1998a). The constructivist paradigm also means that the subjectivity of the researcher while interpreting the results of the surveys and focus group discussions is acknowledged.

The interactive and transactional process of involvement with participants was further reflected in the fact that the developed tool, which was based on the initial survey and focus groups, was taken back to the community for re-evaluation (Denzin & Lincoln, 2000). The constructivist paradigm enabled the researcher to develop a tool that is trustworthy and authentic to the knowledge of the wide range of participants included in the study (Denzin & Lincoln, 1998a). This paradigm allows one to reflect all the views and needs expressed and does not limit the researcher to using statistics to display only what the majority of the participants expressed. The aim of the inquiry process during a constructivist research process is to *understand and to reconstruct* (Lincoln & Guba, 2000). In this research the aim was to *understand* the needs of the participants relating to the development of a tool for parents for the stimulation of communication skills in infants and then to *reconstruct* those meanings in the development process of this tool.

4.3 AIMS OF THE STUDY

The main research aim of this study was to develop a tool for parents of a specific South African community for the stimulation of communication skills in infants that is valid in terms of content and is judged by parents to be practical and empowering. In order to achieve this aim the research was planned in three phases with the following objectives:

4.3.1 Research Objective: Phase One

The aim of Phase One was two-fold:

- to determine the needs and preferences of parents in terms of the informational content and format of a tool for the stimulation of communication in infants
- to determine perceptions of professionals in early intervention regarding relevant content for inclusion in a stimulation tool for infants

4.3.2 Research Objective: Phase Two

The aim of Phase Two was to develop a tool for the stimulation of communication in infants based on the needs and preferences expressed by parents and professionals, the involvement of parents from the community in focus group discussions, as well as the sound theoretical underpinnings of infant communication development and trends in the prevention of communication disorders.

4.3.3 Research Objective: Phase Three

The aim of Phase Three was to validate the tool by determining whether it fulfilled the needs of parents in terms of informational content and format.

4.4 THE RESEARCH DESIGN

The research design has to reflect the aims of the research (Leedy & Ormrod, 2001). In order to reach the objectives of this study, as stated in 4.2, a research design was needed that provided quantitative information on the general trends within the community as well as more in-depth qualitative information on individual and group needs and preferences.

An *explorative research design* that relied on the active participation of the community was therefore selected for this study. Broad statistics as well as small-group opinions were of importance in order to interpret the needs of families within the context of the community. Therefore the researcher aimed to obtain both qualitative and quantitative information.

Qualitative methods are frequently used to answer questions about the complex nature of phenomena, often with the aim of describing and understanding it (Leedy & Ormrod, 2001). Qualitative methods provide an interpretive understanding of data, looking at both the broader reality as well the individual human experience (Denzin & Lincoln, 1998a).

In contrast, quantitative methods are used to answer questions about relationships between variables with the aim of explaining or predicting phenomena (Leedy & Ormrod, 2001). Such quantitative methods rely heavily on aspects such as the use of standardised instruments and representative samples (Leedy & Ormrod, 2001). Certain quantitative measures can, however, be employed in an interpretive study with the aim of enriching the data (Denzin & Lincoln, 1998a). Such data would then be interpreted in a more descriptive manner, relying less heavily on statistical tests and analysis (Denzin & Lincoln, 1998a).

This research was descriptive in nature as it aimed to analyse the needs and opinions of a large number of participants by means of a survey (Leedy & Ormrod, 2001) and focus group discussions (Bloor, Frankland, Thomas & Robson, 2001). Aspects that were of importance in this research, such as the feelings and attitudes of parents and professionals, could not be measured by means of direct observation (Maxwell & Satake, 1997). The use of a *descriptive survey* however, did allow the researcher to determine the attitudes of a large number of participants (Leedy & Ormrod, 2001).

Surveys are viewed as ideal tools for determining the attitudes of a community (Stein & Cutler, 1996).

Data gathered through descriptive surveys are, however, susceptible to distortion due to bias (Leedy & Ormrod, 2001). One potential source of bias is any influence that may have disturbed the randomness of the sample selection. In this study the potential for bias during the completion of the survey was limited by selecting the parents from the community in a random manner (as described in 4.6.2). The participants were, however, all from a specific community. As the participants of this study all fell within a demarcated geographical area the results from this study cannot be generalised to the entire South Africa.

Furthermore the research results may be biased due to the researcher's preconceived notions and personal involvement in the research process (de Vos, 1998). In order to increase the reliability of the results and limit bias an external rater is used in every stage of each of the three research phases (Leedy & Ormrod, 2001). The use of an external rater in this study helped to ensure that all procedures were strictly adhered to, that the surveys were accurately coded and checked and that the focus group transcriptions were exact. However, through the identification of the researcher's own conceptual framework, namely the constructivist paradigm, the influence of the researcher on the research results is acknowledged as part of the transactional process. The research process reflected contributions from the researcher, the community as well as other professionals.

Consultations with a respected professional who has experience in the use of applied research within South African communities provided valuable insights into the applicable aspects to be included in the research design (Mc Conkey, 2002a). As the main aim of this study was to develop *a tool for parents* that is judged to be practical and empowering, the decision was made to apply the principles of *participatory action research* in order to *actively involve parents* in the process of developing the tool (Denzin & Lincoln, 1998b; Leedy & Ormrod, 2001).

Participatory action research is most applicable to finding solutions for specific communities (de Vos, 1998; Leedy & Ormrod, 2001). *Focus group discussions* were

used in conjunction with the surveys in order to obtain a broader, richer perspective on the needs and opinions of *parents* from the target community (Bloor et al., 2001). Although the professional participants provided valuable information in the survey the focus group discussions aimed to highlight the needs of the parents in the community and achieve a consensus on important issues. This was done as the main aim of the study was to develop a tool that was judged by *parents* in the community as practical and empowering. Focus groups have been found to be ideally suited to research involving needs assessments and the development of instruments as in the case of this study (Carey, 1994). As the researcher aimed to create a relevant tool for parents, on the stimulation of communication skills in infants, it was vitally important that the *parents themselves* were provided with the opportunity to participate in the process of formulation.

Research has shown that focus group discussions are well suited to creating an atmosphere that is conducive to explorative research (Bristol & Fern, 1996; Berg, 1998). Focus group discussions give the participants an opportunity to compare and reflect on their needs, sometimes even allowing new viewpoints to evolve (Bloor et al., 2001). The researcher is given the opportunity to determine individual views as well as to observe interactions between group members (Berg, 1998). In contrast to the survey which provides the researcher with a broad, generalised view of the needs within the community, focus group discussions provide more qualitative, in-depth information. A research design which used a combination of these processes was, therefore, ideally suited to this study.

Focus groups are, however, also susceptible to bias should participants censor their responses to conform to the group (Carey, 1994). This potential problem was eliminated by ensuring that the participants first filled out their individual questionnaires, where their unbiased opinions were expressed, before participating in the focus group. This allowed the researcher to compare their individual responses with their contributions in the focus group discussions.

Surveys and focus groups were used to gather information from different groups of participants during the first phase of the research (Leedy & Ormrod, 2001; Bloor et al., 2001). The opinions expressed by the participants during the first phase

determined the procedures that were followed in the second phase, which in turn influenced the resulting tool that is validated in the third phase. Participatory action research allowed the researcher to involve parents in the community in the process of creating a tool for the community (Leedy & Ormrod, 2001). This approach was the most effective means of addressing the real needs within the target community. Participants were actively involved, through focus group discussions in each phase, in making decisions regarding their needs, the development of the tool as well as the validation of the tool.

Different groups of participants were involved in the different focus groups in each phase of the research. Due to the fact that the three phases took place over the course of a year it was not logistically feasible to track down the same individual parents in their homes in order to keep the members of the focus groups constant throughout all of the phases. This would only have complicated the research unnecessarily and could have been viewed as an invasion of privacy. Involving a different set of parent participants from the specific community in each phase also ensured the incorporation of new ideas and provided for a larger pool of data to base findings on.

By involving participants in the research process, the outcome of the research was directly determined by their opinions. As discussed earlier, participatory action research involves the community directly in the research process and is especially applicable when focussing on meeting the needs of the local population (Denzin & Lincoln, 1998b; Leedy & Ormrod, 2001). In this way the use of a survey and focus group discussions as part of an explorative research design allowed the researcher to meet the objectives that have been stated in 4.3.

4.5 RESEARCH PHASES

The research was conducted in three phases, as schematically represented in Figure 4.1.

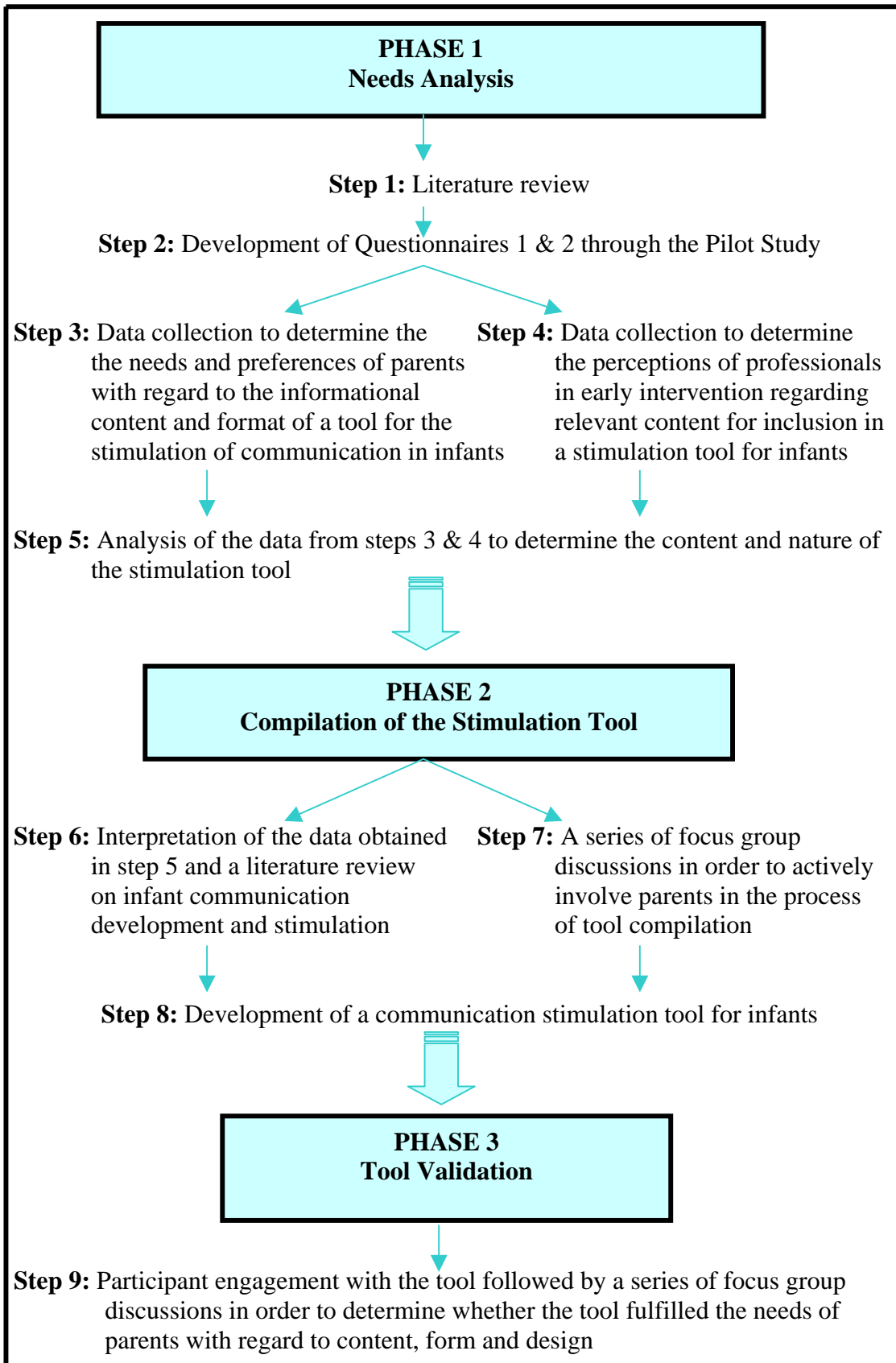


Figure 4.1 Research phases

4.6 PARTICIPANTS IN THE STUDY

As schematically presented in Figure 4.2, a variety of participants were included in the research.

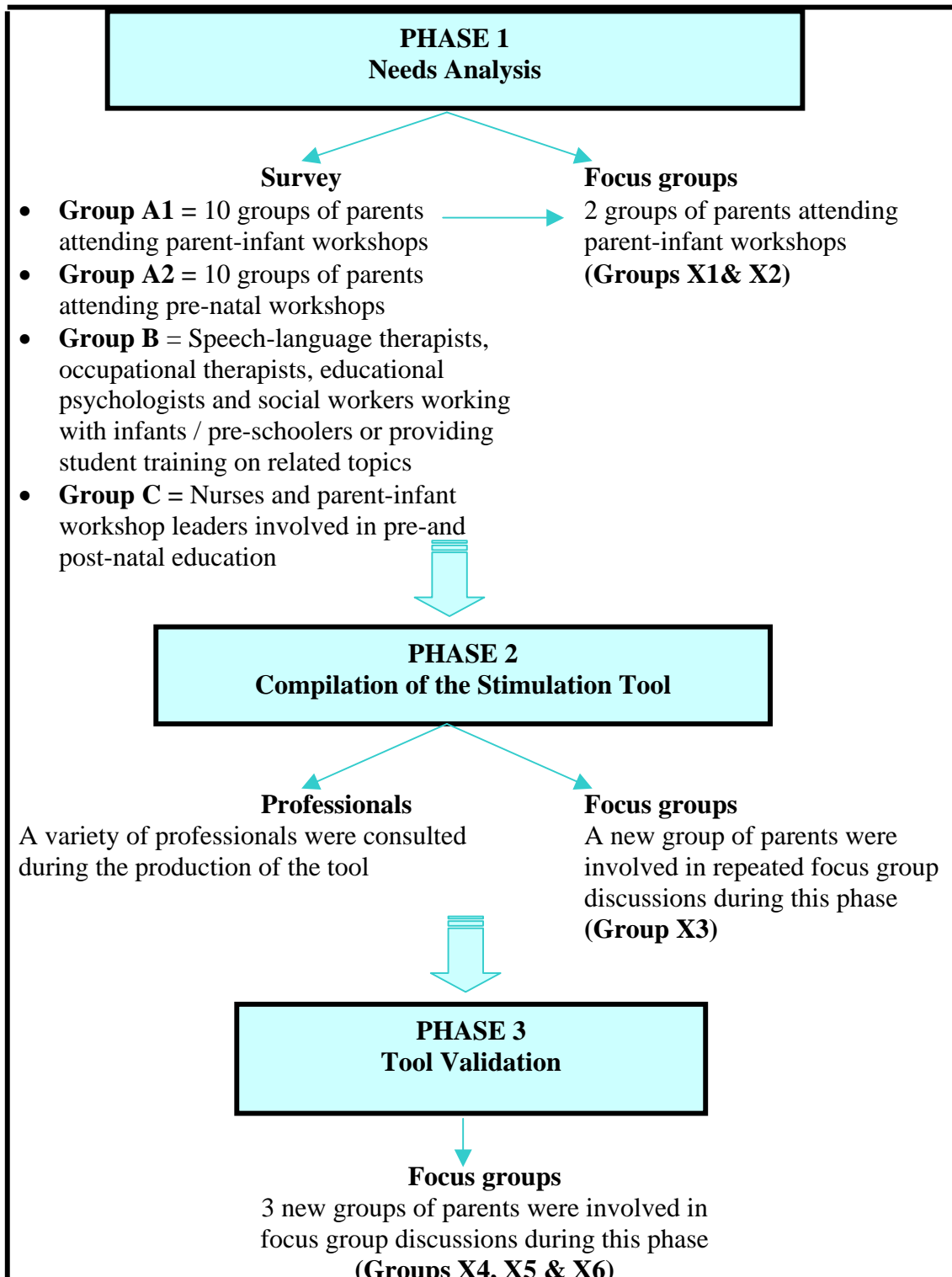


Figure 4.2 Research participants

In order to determine the needs of the community, the researcher opted to select parents and professionals as participants in the survey. The inclusion of professionals in the survey provided valuable information about the types of questions and problems parents bring to professionals. Parents however, were consulted repeatedly during focus group discussions, throughout all three research phases. This was done as the stimulation tool that was developed in this study is aimed at parents and must, therefore, primarily meet their needs.

4.6.1 Selection Criteria

The following criteria were applied in the selection of participants:

.1 Criteria for the selection of both parents and professionals as participants

- **Geographical area**

This study was conducted within certain physical boundaries in order to develop a tool that meets the needs of a specific community. Communities are frequently formed and defined by physical location (Fetterman, 1998). This study targeted a specific community that is located in the geographical area described as Pretoria East. All of the parent participants in this study resided in this area and all the professional participants worked within its boundaries. Research findings indicate that not all geographic areas have the same needs and services that are targeted at a specific geographical area are more likely to effectively meet the needs of the community (Taylor, Carran, Baglin, Rembow & Fleming, 2000).

One of the important defining characteristics of a community is economy (Fetterman, 1998). According to the traditional approach (Hauser, 1994) one can describe the people residing in the geographical area of Pretoria East as a middle to upper-middle income group. In social terms this area can be described as a developed community. The socio-economic status of the group is an important factor because family income and parental educational levels have been found to be more closely linked to

developmental performance than the ethnicity or race of the family (Brooks-Gunn, Klebanov & Duncan, 1996; Patterson, Kupersmidt & Vaden, 1990).

Since the dawning of a new era for South Africa in 1994 many community projects have focused on previously disadvantaged communities within South Africa (Mc Conkey, 1996a; Mc Conkey, 1996b). This is necessary in order to rectify previous imbalances in service delivery (Pickering et al., 1998). It is, however, important for professionals to recognise the continuum of communities in the South African context that range from the developing to the developed (Pickering, et al., 1998). Due to diversities in cultures, languages and the availability of resources speech-language therapists in South Africa are faced with the challenge of meeting the needs of a range of different communities (Fair & Louw, 1999). Professionals do, however, need to consider the needs of *all* parents, from *all communities* (Fetterman, 1998). It is therefore important that research efforts reflect the continuum of service provision and recognise that there remains an obligation to also address the needs of the developed communities within South Africa.

The area that is targeted in this study lies between longitudes 28°13'30" and 28°19'00" East and latitudes 25°45'15" and 25°49'17" South. The demarcated area is depicted in Figure 4.3. This area includes the following suburbs (listed alphabetically): Alphen Park, Ashlea Gardens, Baileys Muckleneuk, Brooklyn, Constantia Park, Erasmus Kloof, Erasmus Rand, Faerie Glen, Garsfontein, Hazelwood, Lynnwood, Lynnwood Glen, Lynnwood Manor, Lynnwood Park, Lynnwood Ridge, Maroelana, Menlo Park, Menlyn, Monument Park, Newlands, Neuw Muckleneuk, Waterkloof, Waterkloof Glen, Waterkloof Heights, Waterkloof Park, Waterkloof Ridge.

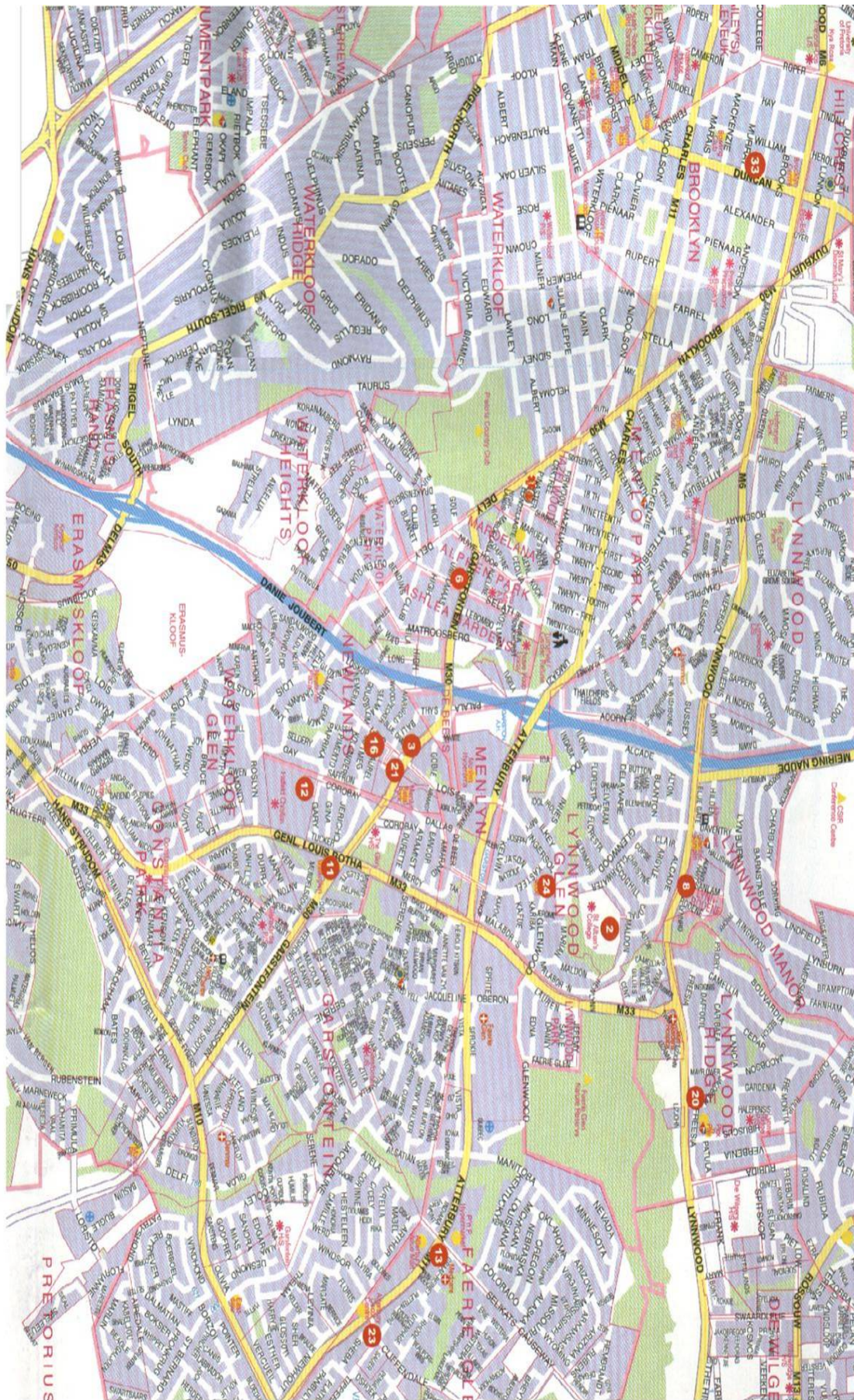


Figure 4.3 The demarcated geographical area

- **Language**

All subjects had to be proficient in English, as the questionnaires were compiled in English. In order to ensure the validity and reliability of the results of a survey all participants should be proficient in the language that is used (Neuman, 1997). If the researcher had to interpret answers given in another language or translate questions it could have influenced the accuracy of the data.

- **Population group**

As was the case in this study, communities that are not exclusively made up of one race or culture can be defined by physical location (Fetterman, 1998). All professionals with the relevant qualifications and work experience were invited to participate in the study and random selection was used to determine the parent participants. The researcher neither targeted nor excluded participants from any particular race or culture.

- **Gender**

Gender was not a criteria for participation in the research. All parents and professionals, regardless of their gender, who qualified according to the other specifications, participated in the research. The proportions included therefore reflect the other selection criteria as well as the selection procedure used.

.2 Specific criteria for the selection of parents as participants

- **Age of dependants**

In order to target parents to whom the topic of the questionnaires, namely: the development of a tool for parents for the stimulation of communication skills in infants, is relevant, all the parents that participated in the study had to either be expecting an infant or they had to have a child that is younger than eighteen months.

.3 Specific criteria for the selection of professionals as participants

The following criteria apply to the selection of the external rater as well as the participants in the survey.

- **Qualifications**

The professionals that were invited to participate in the study are qualified as speech-language therapists, occupational therapists, educational psychologists, social workers, nurses or parent-infant workshop leaders. Communication development has a reciprocal influence on many other areas of infant development (Owens, 2001) and is often a source of concern to parents (Rossetti, 2001). Concerned parents may, however, not always consult a speech-language therapist but rather one of many different professionals regarding their child's communication development (Rossetti, 2001). This study therefore attempted to reflect a variety of professional opinions by inviting a wide range of relevant professionals to participate.

- **Work experience**

All the professionals that participated in the study had to be involved in early intervention by working with infants or pre-school children (Musick & Stott, 2000). This was considered an important criteria as the study specifically focused on the knowledge and attitudes of professionals regarding *infant* communication development. Current practices regarding the provision of services to *infants* differ from practices regarding services to older children (Rossetti, 2001). It was important that the data analysis reflects this current practice (Leedy & Ormrod, 2001) in the provision of specialised communication-related services to infants.

.4 Specific criteria for the selection of the external rater

Besides fulfilling the general criteria of qualifications and work experience, as described above, that all professional participants had to comply with, there were further specific criteria regarding experience that the external rater also had to fulfil.

- **Experience**

An external rater (also frequently referred to as the independent or second rater) needs to be trained in order to perform the specific tasks required (Brink, 1999). For this study the external rater needed to have experience in the execution and coding of surveys and the transcription of focus group discussions. These skills were central to the role the external rater had to fulfil in this study.

4.6.2 Description of Selection Procedure and Participants

The participants and the means by which they were selected, are described forthwith.

.1 The external rater

The external rater was the only participant who participated in all three research phases.

**** Selection procedure***

Several procedures were used in the selection of the external rater.

- The researcher contacted the governmental Department of Statistics via telephone in order to locate all of the people who had acted as supervisors and external raters during the South African 2001 census for the designated geographical area.
- All of the supervisors and external raters who fulfilled the general criteria for participation as well as the specific criteria for professional participants were contacted telephonically.

- A supervisor who had experience in completing and coding questionnaires as well as in transcribing group discussions and who was prepared to work for a set remuneration per hour was selected.

** Description of the external rater*

The external rater can be described as follows:

- Geographical area and language: Due to the selection criteria, imposed on the participants in the study, the external rater worked within the boundaries of the geographical area designated for the study and was proficient in English.
- Qualifications and work experience: Due to the selection criteria, imposed on all professional participants in the study, the external rater was qualified as a parent-infant workshop leader and had experience working with infants, toddlers and parents. Furthermore the external rater also had experience as a co-ordinator and supervisor during two censuses in South Africa. In this capacity, the external rater coded and double-checked thousands of questionnaires and performed hundreds of interviews.
- Age and gender: The external rater was 30 years old at the time of the study and is female. Age and gender was, however, not as significant to the external rater's ability to fulfil her function as her qualifications and work experience.

.2 Selection Procedure: Phase One

- Group A1: All parents attending parent-infant workshops (e.g. "Moms and Babes" or "Moms and Miracles") were eligible to be included in the survey. The specific groups that were included in the study were chosen by random selection. This entailed making a list of all the parent-infant workshops in the demarcated geographical area, assigning a number to each and then pulling ten random numbers out of a hat (Leedy & Ormrod, 2001). The group leaders were contacted and arrangements were made for the researcher and external rater to visit the

group. The researcher and external rater visited the groups during their normal times, without advance notice to the parents and whichever parents were present at the time were requested to participate in the survey.

- Group A2: All parents attending pre-natal classes were eligible to be included in the survey. The specific pre-natal groups that were included in the study were chosen by random selection. The same process, as described for the parent-infant workshops, was followed in the selection of pre-natal classes, and participants from these groups.
- Group B: Speech-language therapists, occupational therapists, educational psychologists and social workers who were working with infants or pre-schoolers or who were involved in student training on topics related to infants or pre-schoolers, in the specified geographical area, were included in the study. All of the professionals from the above-mentioned categories, that could be contacted, were requested to participate in the research.
- Group C: Nurses and parent-infant workshop leaders who were involved in pre- and post-natal education in the specified geographical area were included in the study. All of the professionals from the above-mentioned categories, that could be contacted, were requested to complete questionnaires.
- Group X1 and X2: Two groups of parents who were attending parent-infant workshops (e.g. “Moms and Babes” or “Moms and Miracles”) were used to form focus groups. According to Bloor et al. (2001) the advantages of using pre-existing social groups as focus groups include the following: discussion and debate is promoted; participants find it easier to be open and honest with people they are familiar with; attrition rates are lower as participants are more likely to attend and it is logistically easier to organise. As open and honest discussion and debate are crucial to determining the needs of parents within the community the decision was consequently made to make use of pre-existing parent groups in this study.

.3 Description of Participants: Phase One

The following analysis and discussion of the biographical data places the results of this research within a clear framework. Describing the population for whom the tool is developed also clarifies certain choices that were made in phases two and three of the study.

** Description of survey participants*

Section A of Questionnaires 1 and 2 (Appendices B and C) gathered biographical information from the survey participants. The description of these participants is divided into a description of the parent participants and a description of the professional participants.

Parent participants

A total of 184 parents from the community completed questionnaires. These participants were targeted according to the procedures described in 4.5.2, point 1. All the participants that were approached agreed to participate in the study. Obtaining a high return rate is important for ensuring the reliability of the research results (Leedy & Ormrod, 2001). The reason why 100% return rate was obtained for the parent participants in this survey was due to the fact that the researcher waited while the participants completed the questionnaires and then collected them at once. The use of pre-natal groups and parent-infant groups meant that the researcher had a captive audience where it was feasible to wait and collect the questionnaires upon completion.

In Questionnaire 1, Section A, the first question gathered information on **the ages of the parent participants**, which is displayed in Figure 4.4.

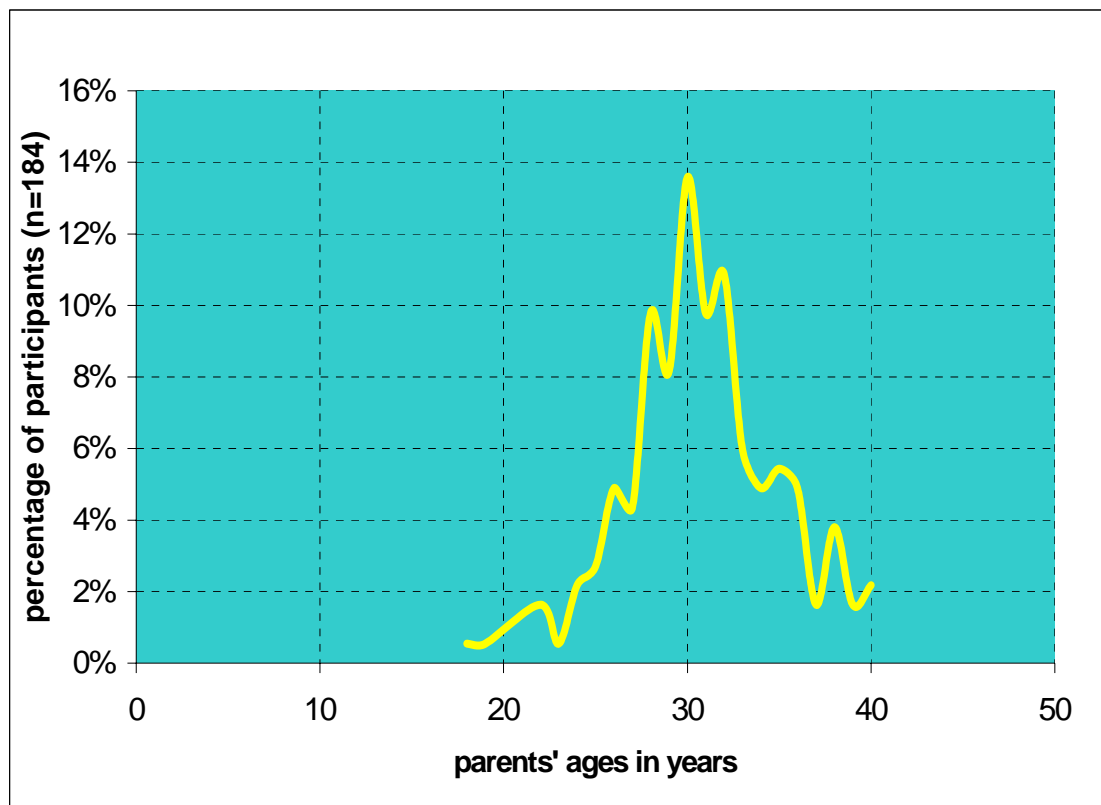


Figure 4.4 Ages of the parent participants

According to Figure 4.4 the participants ranged from late teens to forty. The majority of the parent participants were in their late twenties and early thirties. The ages of the participants may reflect the criteria which were used in selecting participants. One of the selection criteria was that participants had to have a child that was 18 months or younger. People who are in their late twenties and early thirties fall into the age-group that is referred to as *early adulthood* and establishing families is typical of the early adulthood stage (Louw, et al., 1998). The fact that the survey participants were relatively young implies that the results of the survey, and consequently the study, may reflect the needs and preferences of a subgroup within the community. The fact that no parent participants over forty were included in the survey implies that the resulting tool may be more applicable to younger parents. People's needs and pastimes change as they grow older (Louw, et al., 1998). Parents who have children later in life may therefore have needs and preferences which are not reflected in this study.

Information gained from the second question in Section A of Questionnaire 1 revealed **the proportion of fathers to mothers in the participant group**. This is presented in Figure 4.5.

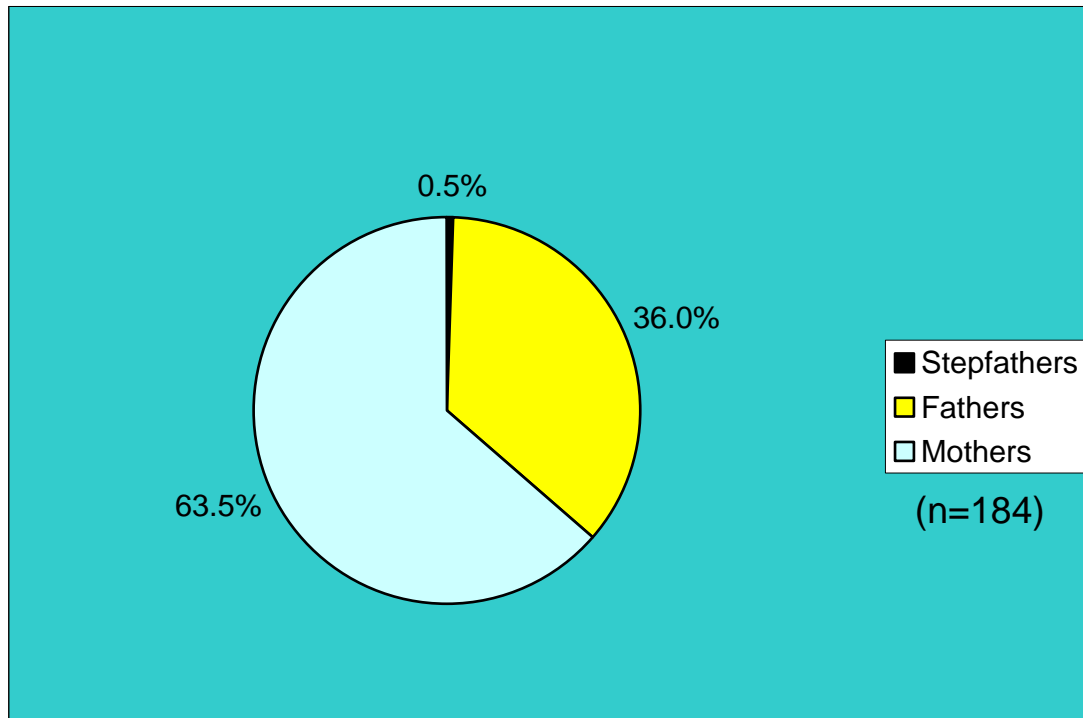


Figure 4.5 Proportion of mothers to fathers

As displayed in Figure 4.5 there were nearly twice as many mothers (63,5%) as fathers (36%) in this group and only one stepfather participated in the study. This is explained by the fact that fathers generally work (Louw et al., 1998) and are therefore unable to attend parent-infant workshops. Almost all of the father participants were attending pre-natal classes with their partners. These classes are presented at night and, therefore, allow for working fathers to attend.

In the past the more traditional role of the mother was the care of children and the upkeep of the home (Louw et al., 1998). Research has indicated that mothers spend more time with their infants than their spouses, with the majority of fathers spending less than 20 hours a week with their infants (Hadadian & Merbler, 1995). This traditional role is changing, however, as more and more mothers are becoming economic contributors in the home (Louw et al., 1998; Widerstrom et al., 1997). If mothers work outside of the home it may lead to overloading which can result in an

increase in stress in the home, especially if fathers are not very involved in caring for children (Louw et al., 1998). Despite a shift in societal expectations which has resulted in *a call* for fathers to become more involved in childcare changes are slight and fathers continue to spend significantly less time than mothers in childcare activities (McBride, Rane & Bae, 2001). In this study the mothers were participating in mother-infant workshops that were held in the middle of the day and it would, therefore, appear that they were not working outside of the home on a full-time basis at the time of the study. The targeted geographical area is an affluent area and the mothers might not have been economically active.

It would appear that the community expects more mothers than fathers to be involved in these workshops as most parent-infant workshops are specifically geared towards mothers, are presented in the middle of a weekday and are often advertised as *mother-infant* workshops. This may be due to the assumption that mothers are more nurturing than fathers (Bentley & Fox, 1991). Research in early intervention has indicated that it may be difficult to involve fathers in discussions (Mc Conkey, Mariga, Braadland & Mphole, 2000).

Researchers have suggested that mothers and especially new mothers, as was the case in this study (depicted in Figure 4.8), have a greater need for information than fathers (Wendland-Carro, Piccinini & Millar, 1999). The fact that more mothers participated in the survey in Phase One, was taken into consideration in the validation of the tool in Phase Three.

Question three, in Section A of Questionnaire 1, explored the **family structures** of the participants. The data is displayed in Figure 4.6.

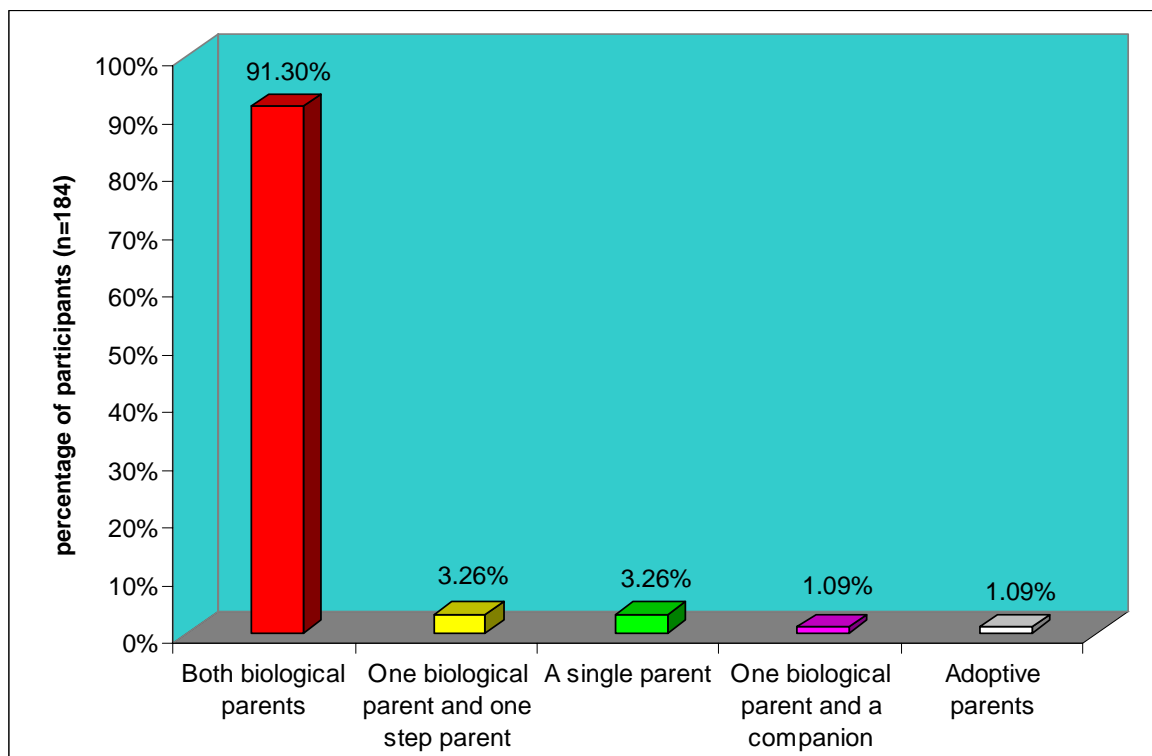


Figure 4.6 Family structures of participants

According to Figure 4.6 the majority of participants (91%) were in a family structure where both biological parents are present in the home. This result is not typical of international trends in family structure as there is a climbing divorce rate in most countries (Lester, 1996).

In South Africa today the traditional nuclear family is not only affected by divorce and tendencies not to marry, but also by the HIV/AIDS pandemic. Research has indicated a positive correlation between orphan rates and the prevalence of HIV/AIDS (Ainsworth & Filmer, 2002). In 1999 the prevalence of HIV/AIDS in South Africa was as high as 19,94% (the second highest of all 28 countries included in the study). It is, therefore, expected that South African families will be affected by the high HIV/AIDS rate, resulting in an increase in single parent families as well as increasing financial burdens on the government (Ainsworth & Filmer, 2002). The financial implications of an HIV/AIDS pandemic in South Africa will affect every family and community. Money spent on one issue cannot be used for other needs. Every family is therefore affected by the drain on the country's resources. HIV/AIDS will affect the general population of South Africa by influencing family structures, resulting in more

single parents and orphans as well as the resources available to assist families. Although these trends are expected in South Africa at large it appears that HIV/AIDS is not yet directly impacting on the participants of this study. From Figure 4.6 it is clear that the family structures within the targeted community are still intact. HIV/AIDS is, therefore, not influencing this community at this stage.

The fact that 91% of the parent participants were part of a nuclear family may be related to the fact that a large proportion were still young (late twenties and early thirties). As previously mentioned this age group is referred to as *early adulthood* and people within this group are typically involved in forming intimate, lasting relationships (Louw et al., 1998). The participants' ages may also have been related to the high proportion of two-parent families in terms of the social acceptability of divorce at this age. Behaviour may be influenced by the number of other people who are behaving similarly, making it less acceptable to divorce when most other couples in that age-group are still together (Lester, 1996).

The fact that most families within the target community appear to have two parents who are available on a daily basis to the infants in the home, is to their advantage, making these infants more resilient to possible risk factors (Gilligan, 2001; Osofsky & Thompson, 2000). This implies that the population group at whom the tool is aimed will have the time and support to implement the recommendations. This will add to the practical value of the stimulation tool, and as a result, will influence the communication development of infants and the prevention of communication disorders within the community.

The fourth and fifth questions in Section A of Questionnaire 1 gathered information on whether participants were expecting a child or, if not, what the **ages of the participants' youngest children** were. The findings are displayed in Figure 4.7.

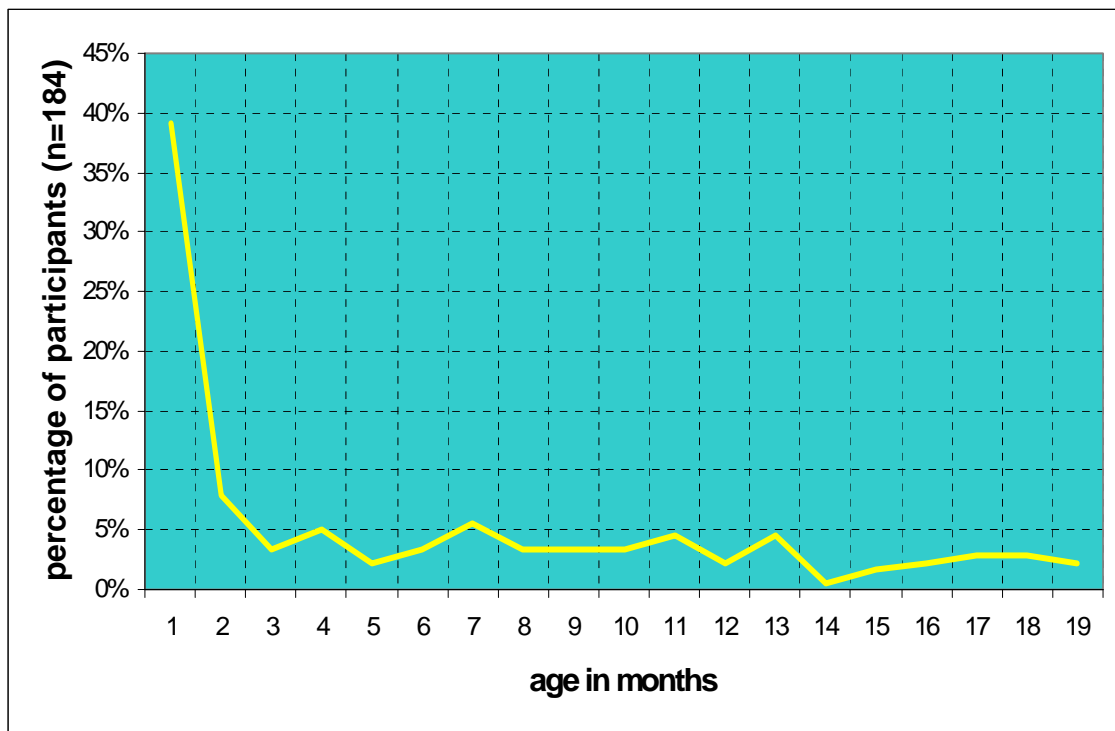


Figure 4.7 Ages of participants' youngest children

As displayed in Figure 4.7 the majority of the participants were either expecting a child or had very young infants. Once again this may reflect the selection criteria which states that the parent participants had to have a baby of 18 months or younger and, furthermore, many of the participants were recruited at pre-natal classes. This concurs with the information presented in Figure 4.4 and Figure 4.6. The participants in the survey were mostly young adults who are typically busy establishing families (Louw et al., 1998).

The tool that is developed in Phase Two focuses on the stimulation of communication skills in infants. This means that the parent population whose opinions are most valid are those who currently have infants, which implies that the profile of the parent participants in the survey were well suited to achieving the objectives of the research.

Question six in Section A of Questionnaire 1 inquired about the **number of children** in the home, including any children that participants were expecting. The results are provided in Figure 4.8.

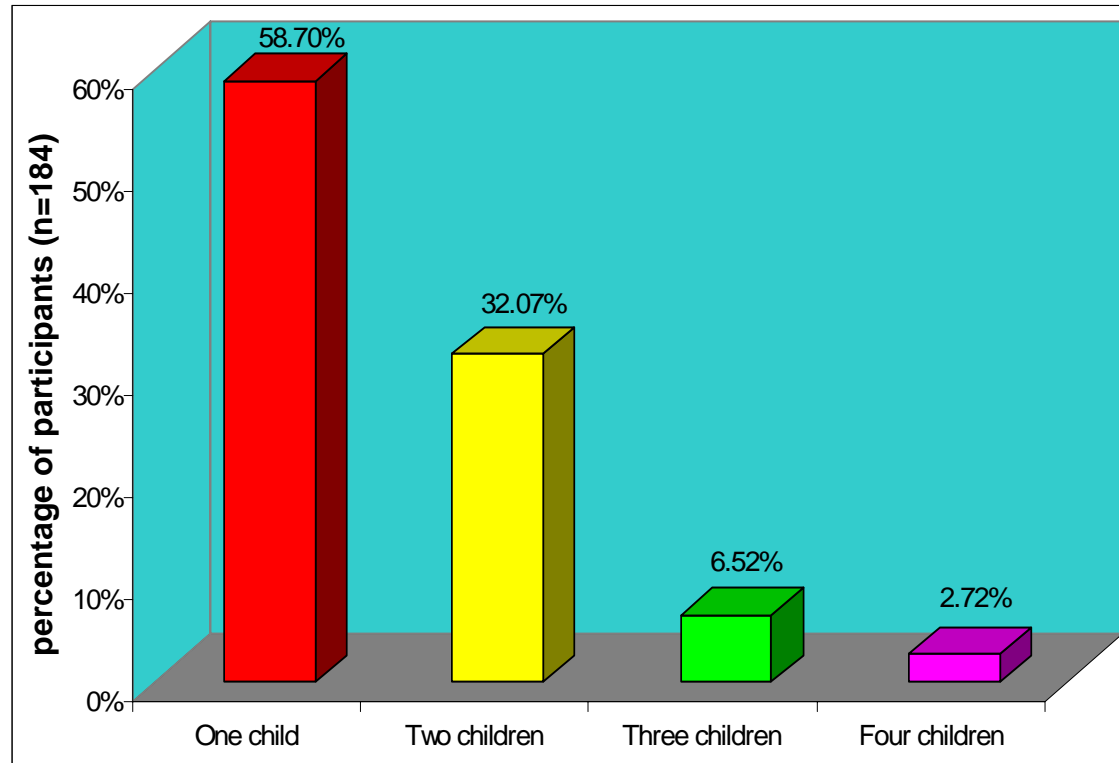


Figure 4.8 Participants' number of children

According to Figure 4.8 the majority (59%) of the participants had only one child and 32% of the participants had two children. This may be typical of more affluent, developed areas where the current trend is for families to have fewer children (Lester, 1996). As the participants do not have large families they should have more time and resources to give to the children that they do have (Werner, 2000). This information is relevant to the researcher as it indicates that a tool for parents on the stimulation of communication skills in infants, which is developed for this population, should be well used because the desire for information will be combined with the resources to acquire and implement it.

Answers to the seventh question in Section A of Questionnaire 1 reflected the parent participants' **level of education**. The data is presented in Figure 4.9.

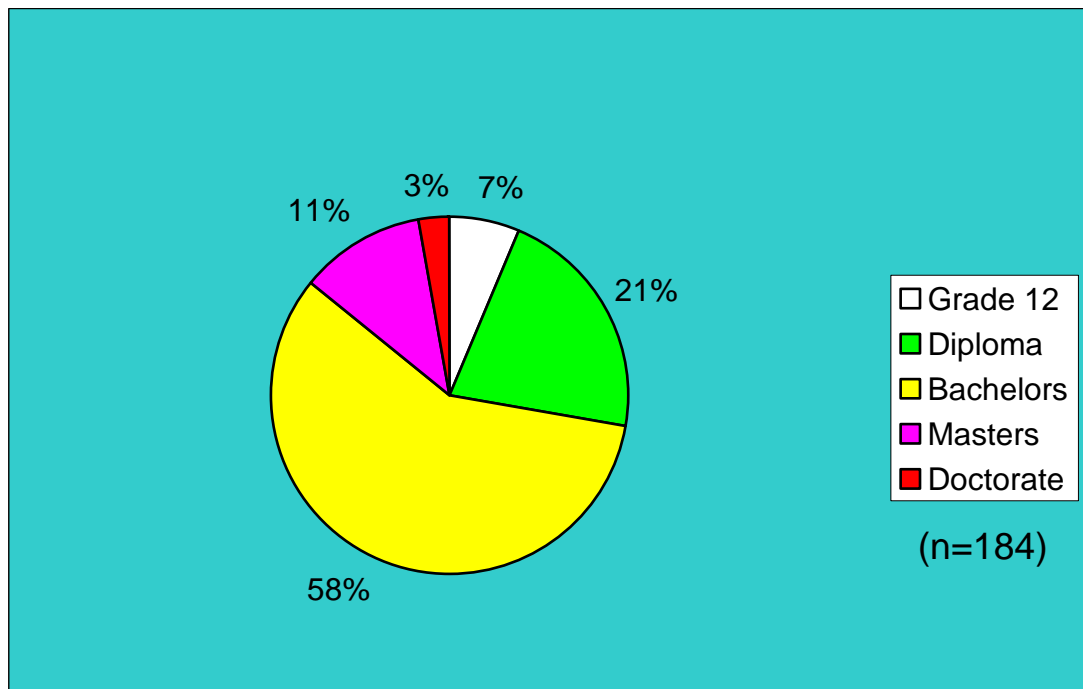


Figure 4.9 Parent participants' level of education

According to Figure 4.9 the participants varied in their level of education from diplomas to doctorates and the majority (58%) of participants had bachelor's degrees. Only 7% of the participants had no tertiary education, indicating that participants in this study were well educated. The question is raised whether there is a correlation between the responses to this question and the family structures of the participants. Research, however, has shown no relationship between the level of education and divorce rate (Maneker & Rankin, 1985).

Maternal knowledge and competence can help promote adequate development and prevent developmental delays (Werner, 2000). A tool on infant communication stimulation which is directed at parents will increase parental knowledge and, therefore, promote adequate development and help prevent developmental delays. Figure 4.9 indicates that the population at whom this tool is aimed is an educated group. These parents should be able to understand and benefit from information on complex issues such as factors that influence the risk for developing communication disorders. This observation is of importance when considering the scope and level of information to include in the tool.

The last question in Section A of Questionnaire 1 explored the average **annual family income** of the participants. The results are presented in Figure 4.10.

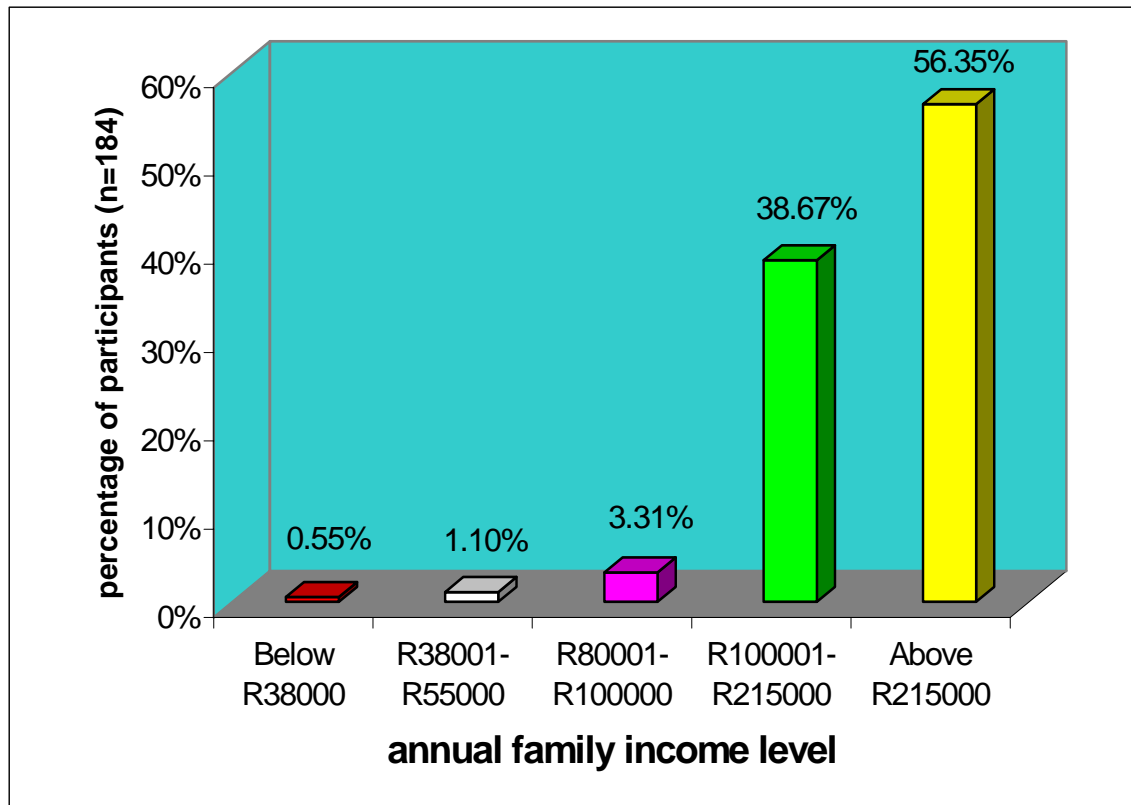


Figure 4.10 Parent participants’ average family income

Figure 4.10 displays the range of incomes of the parents who participated in Phase One of the study. The majority of the participants fell in the top two income levels as stipulated in Article 9(1) of the Fourth Appendix of the South African Income Tax Law. This may be because the targeted geographical area is a developed area. The participants are mostly from the upper-middle income group. It has been found that external resources act as protective factors which help potentially at-risk children from developing problems (Werner, 2000).

The parents in this study had access to external resources which could help them to stimulate their infants and, therefore, maximise development and minimise the impact of any risk factors. In this study the cost of the tool on the stimulation of infant communication skills, appeared not be a critical factor for the population for whom it was developed.

Professional participants

A total of 83 professionals from the community participated in the survey. These participants were targeted according to the procedures described in 4.6.2, point 2. All the participants that were approached agreed to participate in the study. A total of 97% of these professionals completed the questionnaires by the date of collection. Although this is slightly lower than the return rate for the parent participants it is still very high. One of the primary reasons for low return rates is the failure of participants to return their questionnaires (Leedy & Ormrod, 2001). The high return rate in this study may consequently be due to the fact that participants were not required to post their questionnaires to the researcher but that the researcher collected the questionnaires from the participants.

In Questionnaire 2, Section A, the first question gathered information on the **ages of the professional participants**. The data is displayed in Figure 4.11.

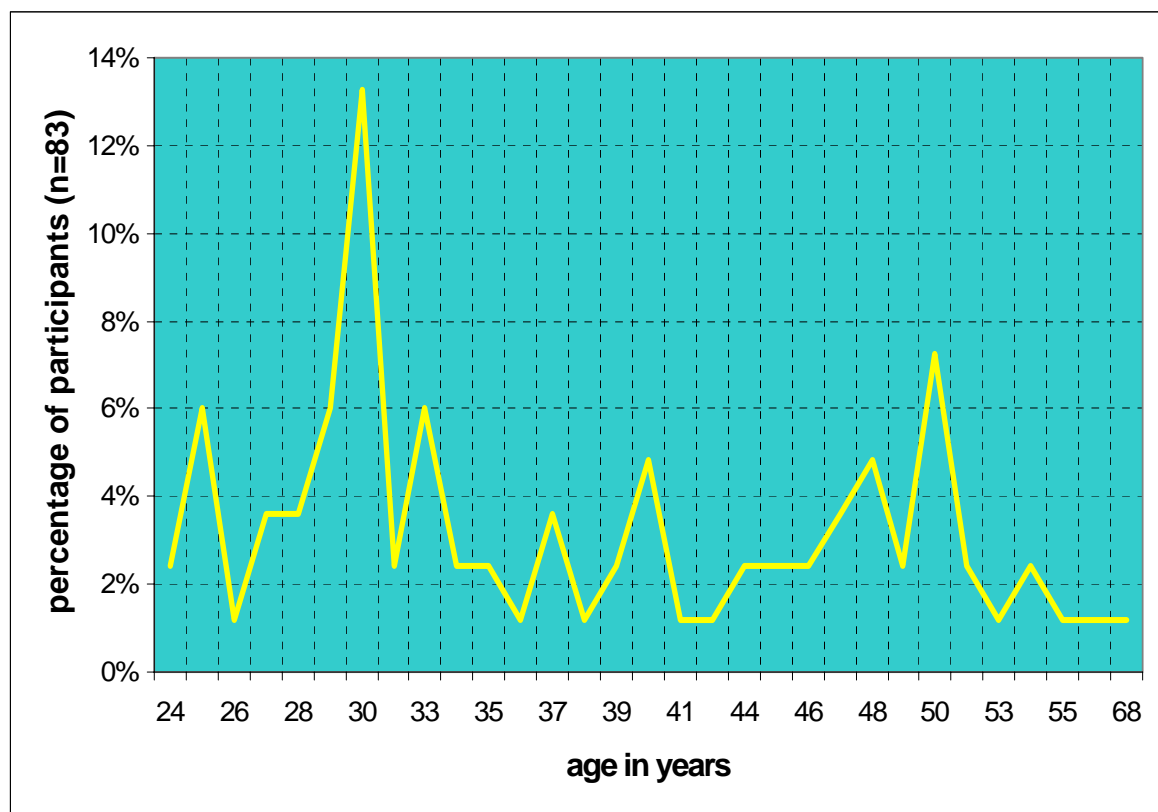


Figure 4.11 Ages of the professional participants

According to Figure 4.11 the professional participants ranged in ages from 24 to 68, and fell within the age-groups that are described as early and middle adulthood (Louw et al., 1998). This is typical of the age-groups at which people tend to be most economically active (Louw et al., 1998). This implies that the wide range of opinions that were obtained in Phase One reflect the viewpoints of professionals from a range of ages.

The second question in Section A of Questionnaire 2 addressed the gender of the professionals. All of the professional participants in Phase One of the research were female. Since all professionals who qualified to participate (according to the selection criteria) were asked to fill in a questionnaire this is a reflection of the professionals who work in the relevant professions, within the demarcated geographical area. It was therefore not possible to include male professionals as there were none available.

Research has indicated that certain jobs within certain communities are typically dominated by a specific gender (Louw et al., 1998). This is true for jobs in industries such as mining and for sales clerks (Louw et al., 1998). It appears also to be true for the professions and community that are included in this study. It is unfortunate that no male professionals were available for inclusion as this infers a gender bias in the results from Questionnaire Two. The survey results from Questionnaire Two may therefore not only reflect the needs and preferences of professionals in the field but may also reflect preferences that are characteristic to females.

The third question in Section A of Questionnaire 2 explored the professional participants' **level of education**. The data is presented in Figure 4.12.

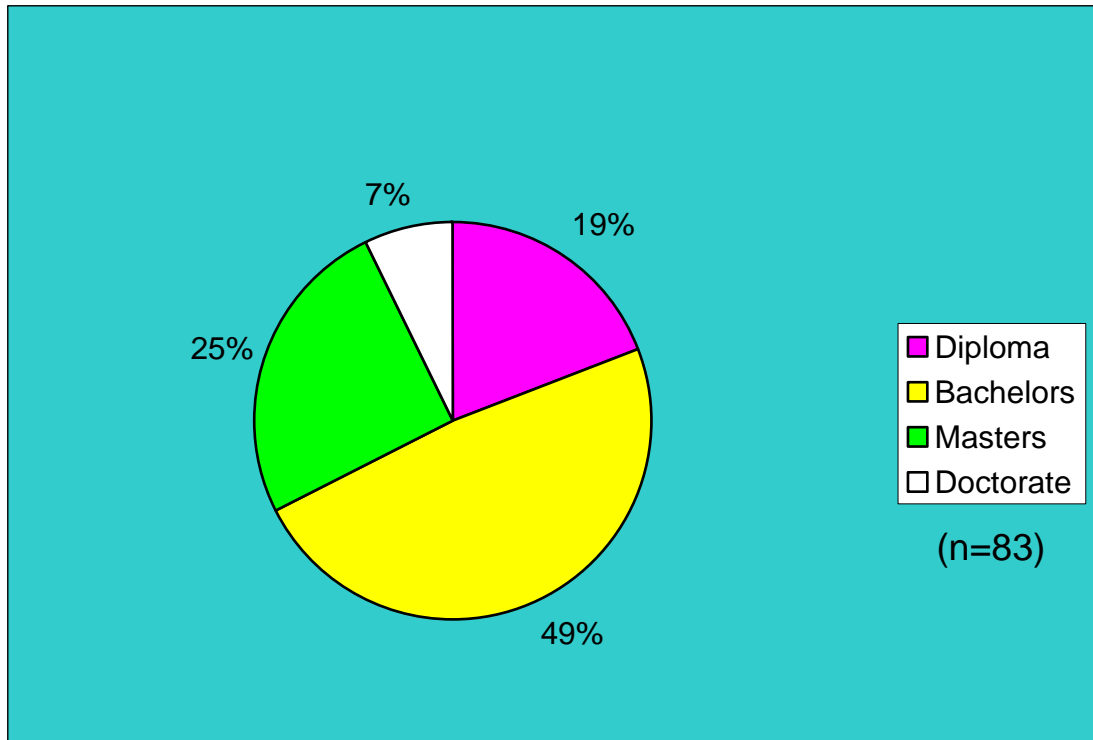


Figure 4.12 Professional participants' level of education

According to Figure 4.12 the participants varied in their level of education from diplomas to doctorates and the majority (49%) had bachelor's degrees. The fact that 19% of the professional participants had diplomas should be considered in the light of Figure 4.13, indicating that the participants included professionals such as parent-infant workshop leaders and nurses who are not required to have a degree in order to practice.

Figure 4.12 indicates that a total of 32% of the professional participants had post graduate degrees and were highly qualified. This may be reflective of the socio-economic status in the geographical area. As depicted in Figure 4.10 the parents who live in this area fall in the upper-middle income group, implying that people from this community should be able to afford the services of highly qualified professionals, making the area a viable market to work in (Fetterman, 1998).

Question four, in Section A of Questionnaire 2, explores the **professions** of the participants. The results are displayed in Figure 4.13.

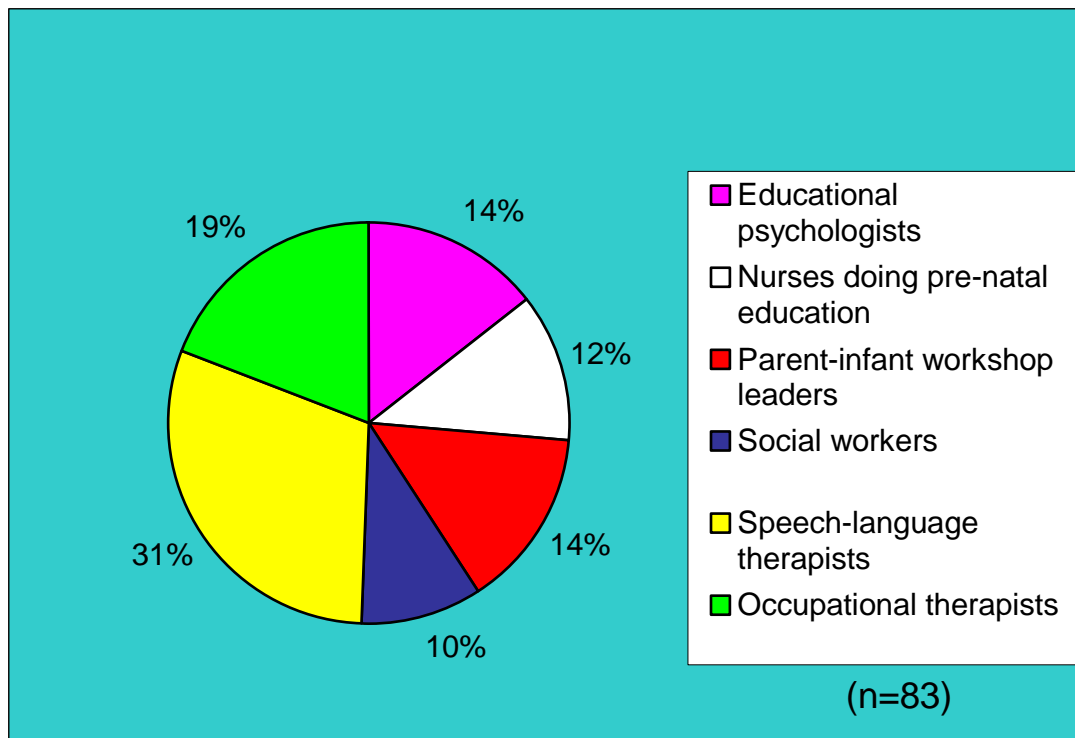


Figure 4.13 Professions of the professional participants

As seen in Figure 4.13 the participants were distributed fairly evenly over six different professions with a slightly larger proportion of speech-language therapists and the data therefore reflected the input of a variety of professionals. As previously stated, the tool that was to be developed in this study focuses on communication development which is not purely the domain of the speech-language therapist. Concerned parents may choose to consult one of many different professionals regarding their child’s communication development (Rossetti, 2001). It was therefore crucial to include the opinions of as many different relevant professionals as possible.

Besides the fact that parents may *choose* to seek advice from another source, there may not be a speech-language therapist available to every parent. There are insufficient speech-language therapists in South Africa to provide the necessary primary prevention services to families with infants (Uys, 1993). As mentioned earlier it was predicted in the nineties that there would be a shortage of approximately 5000 speech-language therapists by the year 2000 (Uys, 1993). The effective provision of services in developing countries therefore depends on close co-operation with other professionals (Fair & Louw, 1999).

Where there are too few professionals to meet the needs for service delivery services should reflect trends in *transdisciplinary service provision*. This would result in the communication needs of the various communities in South Africa being met through a variety of professionals. Professionals could benefit from a co-operative agreement where they retain their disciplinary expertise while benefiting from the shared knowledge and experience of other disciplines (Rossetti, 2001). All of the professionals who work with infants and parents of infants should, however, have access to accurate information and guidelines on the stimulation of infant communication skills. Professionals who are involved in service provision to families with infants should maintain a spirit of collaboration in order to best promote the development of communication skills in infants (Rossetti, 2001).

The fifth and seventh questions in Section A of Questionnaire 2 gathered information on the **experience**, in years, that professionals had in their field as well as in working with parents. This information was important as the tool that was to be developed in Phase Two is directed at parents and the researcher needed to determine whether the opinions of the professional participants was based on actual working experience with parents. The data is presented in Figure 4.14.



Figure 4.14 Professionals’ work experience

According to Figure 4.14 the professionals ranged in their experience from 1 to 2 years (12%) to 30 years experience or more (11%). This was encouraging as the data reflects the views and opinions of the young, upcoming, recently graduated professionals as well as older, more mature and more experienced professionals. Furthermore, trends in the prevention of communication disorders and the provision of services to families have changed constantly over the course of the last couple of decades (Gerber, 1990; ASHA, 1991; Banigan, 1998; Rossetti, 2001). Knowledge, attitudes and current practice, with regard to the provision of communication-related services to infants, have evolved over the years (Rossetti, 2001). This fact will almost certainly also be reflected in the coursework and curriculum in the training of these various professionals. Their opinions provided in the questionnaires therefore will reflect both traditional and recent approaches to the prevention of communication disorders.

The professional participants also ranged in their experience in working with parents. Fifty percent of the professionals had more than ten years experience in working with parents. The input that was given in the survey therefore reflected an insight into the needs of parents. This is an important consideration bearing in mind the different groups of professionals that were targeted in the study. The professionals that were included in the study came from a range of different educational and career backgrounds and had different insights and expertise in the area of dealing with parents. Professionals could gain considerable insight into the provision of services to families with infants, from collaborating with each other and sharing knowledge (Rossetti, 2001). Qualitative research is frequently transdisciplinary in nature (Denzin & Lincoln, 1998a). A qualitative study allows for the inclusion of diverse participants and opinions. The insights each discipline brings to the research data enriches the body of information on which the researcher can draw for the development of tools as well as the development of a theoretical framework.

The above-mentioned differences in work experience implies that the professionals who were involved in this research reflected different orientations as well as different levels of expertise and experience regarding the stimulation of communication skills

in infants. This was important to the research as it ensured a broader, richer data base from which to determine the needs of the community.

Question 6 in Section A of Questionnaire 2 determined which **population groups** the professional participants most frequently served. The results are displayed in Figure 4.15.

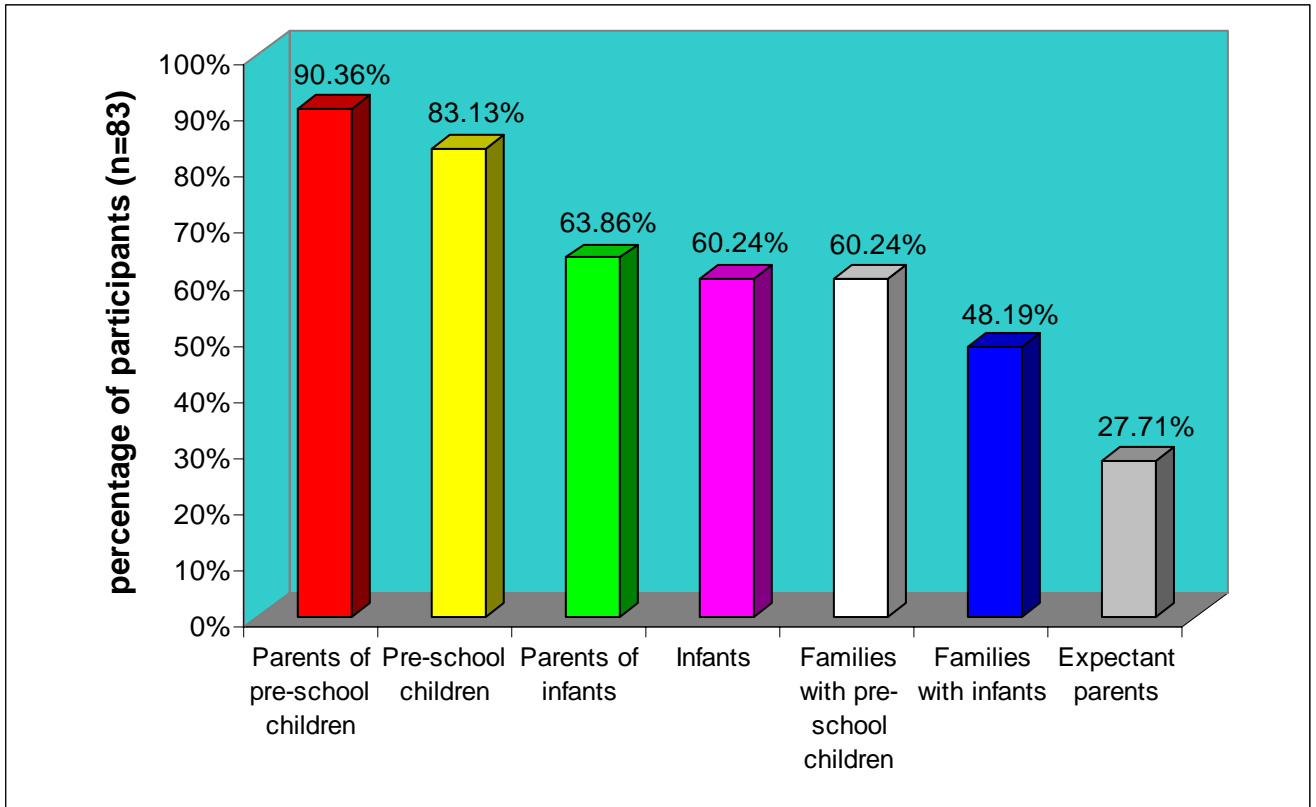


Figure 4.15 Experience with different population groups

As seen in Figure 4.15 the results indicated that the majority of professional participants worked with parents of pre-schoolers (90%), pre-schoolers themselves (83%) or parents of infants (64%). Working with parents on a regular basis implies that these professionals were frequently confronted with parental concerns and questions regarding communication development and stimulation (as was confirmed by the results of the survey, as displayed in Figures 5.9 and 5.10). As the majority of these professionals worked mostly with parents, and were responding to parental concerns on a regular basis, they were ideally equipped for the task of determining the type of information that should be made available to parents.

Concerns and questions of parents of young children differ from the concerns of parents with older children (Rossetti, 2001). It is, therefore, important to note that the professionals that were included in this study work with young children. The opinions of the professional participants were relevant to the development of a tool for parents of infants.

** Focus group participants*

Two groups of parents (group X1 and X2) participated in focus groups during Phase One. Some of the participants that were described in the previous section also participated in focus group discussions. The participants that participated in these discussions are described below.

- Members of two of the parent-infant workshop groups were asked to participate in a discussion once they had been given the opportunity to complete their personal questionnaires. These parent-infant groups were pre-existing social groups with the said advantages (Bloor et al., 2001). The members of these groups had known each other for a few months.
- During the first discussion (group X1) there was one group leader (the researcher) and five participants.
- During the second discussion (group X2) there was one group leader (the researcher) and six participants.

Groups of six to eight individuals are ideal for focus group discussions but the size of the group is pre-determined if an existing social group is used (Bloor et al., 2001). The advantage of smaller groups is that the likelihood of all the participants taking part is larger than with bigger groups (Bloor et al., 2001). The two focus group discussions that were held in Phase One were nearly ideal sizes as they contained five and six participants respectively. Even though this was not controlled by the researcher and was determined by the fact that pre-existing social groups were used, it was advantageous as there was lively debate while still giving members ample opportunity to participate (Bloor et al., 2001).

The biographical information of the participants who participated in the two focus group discussions of Phase One (n=11) is described in Table 4.1.

Table 4.1 A description of the participants in the Phase One focus group discussions

Aspect described	Focus group one (X1, n=5)	Focus group two (X2, n=6)
Ages	21; 29; 30; 32; 36	19; 28; 30; 31; 33; 37
Gender	all female	all female
Family structures	all nuclear family units with both biological parents present in the home	all nuclear family units with both biological parents present in the home
Age of youngest child in months	1; 1; 3; 8; 16	1; 1; 1; 4; 7; 11
Number of children	four of the participants had one child and one participant had two children	four of the participants had one child and two participants had two children
Level of education	two participants had Masters degrees and three participants had Bachelors degrees	one participant had a Masters degree, four participants had Bachelors degrees and one participant had a Diploma
Annual family income	three of the participants had an annual family income of between R100 000 and R215 000 while two participants had an annual family income of above R215 000	three of the participants had an annual family income of between R100 000 and R215 000 while three participants had an annual family income of above R215 000

When comparing the biographical information in Table 4.1 with the information on the survey participants, it appears that the participants who participated in the focus group discussions were representative of the survey group. This is important as it reflects on the validity of the information that was obtained through the focus group discussions (Carey, 1994). The type of information that is obtained through focus groups differs from the information that is obtained through a survey. It is therefore important to determine how well the focus group represents the population as a whole (Bloor et al., 2001).

.4 Description of Participants: Phase Two

A different group of parents participated in Phase Two. As discussed in 4.4 it was neither feasible nor desirable to include the same parents in each phase of the research. The participants of phase two are described below:

- Members of a parent-infant workshop group (group X3) participated in a series of three discussions. This group was also a pre-existing social group. The members of the groups had known each other for several months.
- There was one group leader (the researcher) and seven participants in these discussions. This ideally suited the goal of promoting lively discussions and reaching a consensus (Bloor et al., 2001).

The biographical information of the participants who participated in the three focus group discussions that were held during Phase Two is described in Table 4.2.

Table 4.2 A description of the participants in the Phase Two focus group discussions

Aspect described	Participants (X3, n=7)
Ages	19; 20; 25; 29; 30; 33; 37
Gender	all female
Family structures	six participants came from nuclear family units with both biological parents present in the home and one participant was a step-parent
Age of youngest child in months	0 (expectant); 1; 1; 3; 8; 9; 16
Number of children	four of the participants had one child, two participants had two children and one participant had four children
Level of education	two participants had Masters degrees, four participants had Bachelors degrees and one participant had a Diploma
Annual family income	three of the participants had an annual family income of between R100 000 and R215 000 while four participants had an annual family income of above R215 000.

When comparing the biographical information in Table 4.2 with the information on the participants who participated in Phase One it appears that the participants of Phase Two were also representative of the specific community targeted in the research. This

is important as it reflects on the validity of the information that was obtained through these focus group discussions (Carey, 1994). If the parents who participated in Phase Two were representative of the greater community then the tool that was developed in Phase Two will accurately reflect the needs of the community (Leedy & Ormrod, 2001).

Furthermore the parents that participated in the focus group discussions had all completed some form of tertiary education. Research indicates that using small groups of peers with the same level of education in discussion groups creates a social environment that may promote discussion (Kerka, 1995).

Besides involving parents in focus group discussions the researcher also consulted with various professionals who are involved in creating training tools for parents on the development of language skills and who work in the field of the prevention of language disorders. The specific professionals that were consulted are described below:

- Professor Roy Mc Conkey from the School of Health Sciences, University of Ulster in Northern Ireland, who has experience in developing video training tools for parents in African communities (Mc Conkey, 2002a).
- A video production team from Cochlear in Sydney, Australia who were producing a series of video training tools for parents of hearing impaired children on language development in infants and young children provided observations and consultations during their planning phase (Cochlear 2002b), as well as feedback on a presentation by the researcher (Popich, 2002).
- Speech-language therapists and audiologists who attended the South African Speech Language and Hearing Association's annual conference in Cape Town, South Africa (in November 2002), that focused on the prevention of communication disorders (Popich, Louw & Eloff, 2002).

- Three professional video producers as well as three professionals in the field of the prevention of language disorders were approached individually to scrutinise the draft copy of the tool (November 2002).

.5 Description of Participants: Phase Three

Three groups of parents participated in Phase Three. They are described forthwith:

- Members of three parent-infant workshop groups (group X4, X5 and X6) participated in discussions. Once again these parent-infant groups were pre-existing social groups (Bloor et al., 2001), who had known each other for a few months.
- During the first discussion there was one group leader (the researcher) and five participants (group X4).
- During the second discussion there was one group leader (the researcher) and six participants (group X5).
- During the third discussion there was one group leader (the researcher) and five participants (group X6).

The biographical information of the participants who participated in the three focus group discussions during Phase Three is provided in Table 4.3.

When comparing the biographical information in Table 4.3 with the information on the participants who participated in Phase One it appears that the participants of Phase Three were, as was the case in Phase Two, representative of the specific greater community. The data that was obtained through these focus group discussions is, therefore, more likely to be a valid and reliable reflection of the needs of the community at large (Carey, 1994).

Table 4.3 A description of the participants in the Phase Three focus group discussions

Aspect described (n=16)	Focus group one (X4, n=5)	Focus group two (X5, n=6)	Focus group three (X6, n=5)
Ages	22; 28; 30; 32; 35	19; 27; 29; 33; 34; 37	20; 25; 29; 31; 36
Gender	all female	all female	all female
Family structures	all nuclear family units with both biological parents present in the home	all nuclear family units with both biological parents present in the home	all nuclear family units with both biological parents present in the home
Age of youngest child in months	1; 4; 5; 9; 16	1; 1; 2; 5; 7; 15	1; 1; 1; 8; 12
Number of children	four of the participants had one child and one participant had two children	four of the participants had one child and two participants had two children	three of the participants had one child and two participants had two children
Level of education	one participant had a Masters degree, three participants had Bachelors degrees and one participant had a Diploma	one participant had a Doctorate degree, four participants had Bachelors degrees and one participant had a Diploma	four participants had Bachelors degrees and one participant had a Diploma
Annual family income	three of the participants had an annual family income of between R100 000 and R215 000 while two participants had an annual family income of above R215 000.	three of the participants had an annual family income of between R100 000 and R215 000 while three participants had an annual family income of above R215 000.	four of the participants had an annual family income of between R100 000 and R215 000 while one participant had an annual family income of above R215 000.

4.7 MATERIALS AND APPARATUS

In order to meet the objectives of the study regarding the completion of the survey and focus group discussions, as well as the development of the tool for parents on the stimulation of communication skills in infants, certain materials and equipment were required.

4.7.1 Questionnaires

Two questionnaires were developed during this study. Questionnaires were completed in the presence of the researcher or collected at a later date and did not, therefore, have to be mailed back. This ensures a higher return rate (Leedy & Ormrod, 2001). Questionnaires 1 and 2 were used during Phase One.

.1 Aims of the questionnaires

- Questionnaire 1 (see Appendix B) aimed to identify the needs of parents in terms of informational content and the format of a tool for the stimulation of communication in infants.
- Questionnaire 2 (see Appendix C) aimed to determine the need for a stimulation tool as well as the information professionals in the field judged to be relevant to be included in such a stimulation tool.

.2 Design of the questionnaires

- *Cover letter*

The aims of the study were explained in the cover letter which was provided to the participants (see Appendix A). The cover letter was attached to one of the questionnaires. In the cover letter the importance of the study was emphasised, participants were assured of anonymity; participants were provided with a means of reaching the researcher if they should have any questions and the issue of informed consent was addressed (Leedy & Ormrod, 2001). It is stated that the completion of the questionnaire indicated consent but it was emphasised that participation was voluntary and participants were free to withdraw at any stage (Neuman, 1997).

- *Guidelines followed in the development of the questionnaires*

Certain published guidelines (Leedy & Ormrod, 2001; Neuman, 1997) were followed during the construction of the questionnaires in order to increase the validity and reliability of the results and to ensure the co-operation of the participants. The

questionnaire instructions were short and easy to follow, the language used was clear and unambiguous and the time needed to complete questions was taken into account (Leedy & Ormrod, 2001; Neuman, 1997). Furthermore, care was taken not to express bias by wording the questions carefully and not using any of the alternate answers in the questionnaire in the example provided at the beginning (Leedy & Ormrod, 2001; Neuman, 1997).

- *Types of questions included in the questionnaires*

The majority of the questions included were closed-ended in order to make the questionnaires easier and less time consuming to complete (Leedy & Ormrod, 2001). Closed questions are also preferable to open questions because they make the task of data analysis and statistical processing easier and more concise (De Vos, 1998).

In order to increase the quality of the data obtained a variety of different types of closed-ended questions were included in the questionnaires, namely:

- *nominal rating scales* in Section A of Questionnaire 1 (questions 1, 2, 3, 5, 6, 7, 8) and Questionnaire 2 (questions 1 to 7) in order to obtain biographical information (Fink & Kosecoff, 1998)
- *yes/no questions* in Questionnaire 1 (questions 4 and 15) and Questionnaire 2 (question 12) to obtain specific information (Fink & Kosecoff, 1998) however the researcher, in consultation with the statistician, did not find it appropriate (Questionnaire 1 no. 4 and Questionnaire 2 no. 12) or necessary (Questionnaire 1 no. 15) to include an “*unsure*” option
- *checklists* to provide respondents with a series of options to choose from (Fink & Kosecoff, 1998) in Questionnaire 1 (questions 13 and 14)
- *a combination of checklists with the use of yes/no options* in Questionnaire 1 (questions 18 and 19) and Questionnaire 2 (question 15 and 16) to ensure that the respondents carefully considered each of the options in the checklist, as the options in these checklists were complex sentences and not merely single words
- *Likert scales* to obtain information on the attitudes of the respondents (Leedy & Ormrod, 2001) in Questionnaire 1 (questions 9, 10, 11, 12 and 16) and Questionnaire 2 (questions 8, 9, 10, 11 and 13), providing the respondents with

five possible options as has been recommended in the literature (Neuman, 1997; Stein & Cutler, 1996)

As closed-ended questions can only supply participants with a limited number of options to choose from, the researcher made use of a further category, namely: *other, please specify*. This was used in questions 2, 3, 13 and 14 of Questionnaire 1. This enriched the body of data to analyse and provided participants with a valuable opportunity to insert important information that could, otherwise, have been ignored (Singleton, Straits & Straits, 1993).

Furthermore the researcher made use of an *open-ended question* in order to allow participants the opportunity to express ideas or opinions that were not provided for in the other questions. This was used in question 17 of Questionnaire 1 and question 14 of Questionnaire 2. Open-ended questions allow participants to provide detail but are more time consuming to answer and process (Neuman, 1997; Leedy & Ormrod, 2001).

- *Content of the questionnaires*

The questionnaires were divided into different sections, allowing for issues to be addressed in a logical sequence (Leedy & Ormrod, 2001). The specific sections that were included depended on the aim of each of the questionnaires.

Questionnaire 1 (see Appendix B) was directed at the parent participants and contained 19 questions. It included the following sections: biographical information; the need for a tool for the stimulation of communication in infants; the preferred format in which information should be presented and the desired content for a stimulation tool.

The biographical information that was obtained in Section A (questions 1 to 8) was important to the interpretation of data from the other sections. These questions were also intended to be a non-threatening start to the questionnaire (Singleton et al., 1993). Information that was obtained in this section included aspects such as the respondent's age, the respondent's relationship to the child, the household composition, age and number of children, qualifications and income. The categories

that were used to describe the average family income were derived from Article 9(1) of the Fourth Appendix of the South African Income Tax Law for 2001-2002.

Section B (questions 9 to 12) aimed to establish whether the participants perceived the need for a tool for the stimulation of communication in infants, as the tool was to be based on the needs of the specific community (Fetterman, 1998). Questions in this section addressed issues such as whether parents were sufficiently informed on infant communication development, whether information should be more readily available to parents, whether parents experienced a desire for the provision of more information and whether parents would be prepared to incur expenses in order to obtain more information.

Section C (questions 13 to 15) addressed issues related to the way in which information should be presented to parents. Previous research has indicated that parents have specific preferences with regard to the format in which information is presented (Hadadian & Merbler, 1995; Klein & Briggs, 1987).

Section D (questions 16 to 19) explored the specific content that parents desired in a tool for the stimulation of communication development in infants. Parents could indicate which topics and questions were of interest to them and list other topics that they felt were also relevant.

Questionnaire 2 (see Appendix C) was directed at professionals and contained 16 questions. It included the following sections: biographical information; the need for a tool for the stimulation of communication in infants and the desired content for a stimulation tool.

The biographical information that was obtained in Section A (questions 1 to 7) was once again important to the interpretation of data from the other sections. Information that was obtained in this section included aspects such as the respondent's age, gender, qualification, profession as well as years and type of work experience.

Section B (questions 8 to 12) aimed to establish whether professionals perceived the need for a tool for parents for the stimulation of communication in infants. Questions in this section addressed issues such as whether parents were sufficiently informed on infant communication development, whether information should be more readily available to parents, how often professionals provided parents with information on communication development and the prevention of delays as well as how often information was requested by parents.

Section C (questions 13 to 16) enquired about the specific content that professionals felt should be included in a tool for parents for the stimulation of communication development in infants. Professionals could indicate which topics and questions were relevant and list other topics that they felt should also be included.

The content and layout of the questionnaires was developed by repeatedly consulting with various professionals in the field, namely speech-language therapists, an educational psychologist, mother-infant workshop leaders, parents and statisticians. The researcher proceeded with the pilot study once these professionals were satisfied with the questionnaires.

.3 The pilot study aimed at developing the questionnaires

A pilot study was conducted in order to finalise the content of the questionnaires and to increase their validity and reliability (Neuman, 1997). Subjecting a questionnaire to a pilot study helps to determine whether all the items are easy to understand and answer, establish how long it takes to complete and identify possible problems with data analysis (Leedy & Ormrod, 2001). The aims, participants, materials, procedures and results of the pilot study are presented in Table 4.4.

Table 4.4 Description of the pilot study

AIMS	PARTICIPANTS	MATERIALS	PROCEDURES	RESULTS
<p>*To determine the amount of time needed to complete the questionnaires.</p> <p>*To determine the clarity of the instructions.</p> <p>*To determine whether any questions were ambiguous.</p> <p>*To determine whether sufficient options were provided when answering the questions.</p> <p>*To determine whether there were errors that the researcher should be made aware of.</p>	<p>*The questionnaires were given to a trial group of six individuals. This was done in accordance with recommendations in the literature (Leedy & Ormrod, 2001).</p> <p>*The participants did not fall within the geographical area selected for the study and would, therefore, not be selected for the main study.</p> <p>*The participants were all parents of infants or pre-school children.</p>	<p>Questionnaires 1 and 2 were provided to the participants.</p>	<p>*The researcher identified possible participants and requested their participation.</p> <p>*The questionnaires were given to the participants to complete.</p> <p>*Interviews were done with the participants of the pilot study upon completion of the questionnaires.</p> <p>*An external rater observed the completion of the questionnaires as well as the interviews.</p> <p>*The participants were thanked for their co-operation.</p> <p>*The researcher documented the results of the pilot study and then consulted with the external rater. There was complete agreement on the necessary changes.</p> <p>*The necessary changes were made to the questionnaires.</p>	<p>*Participants took between five and ten minutes to complete a questionnaire.</p> <p>*The punctuation in two of the questions was changed as a result of recommendations that were made by the participants.</p> <p>*None of the participants found any of the questions ambiguous.</p> <p>*All of the participants felt sufficient options were provided when answering the questions.</p> <p>*No further errors were highlighted.</p>

4.7.2 Transcription forms

During the three phases of the research a total of eight focus group discussions were held. These discussions were recorded on audio and video tapes. Forms were used to make verbatim transcriptions of the recordings of the focus group discussions. The

researcher transcribed the discussions according to the rules stipulated in 4.8.1 (procedures for data collection). Transcriptions of the focus group discussions are contained in Appendices D, E, F, G, H, I, J and K.

4.7.3 Equipment

The following equipment was used to make audio and video recordings of the focus group discussions:

- Sony digital audio recorder
- 4 x 60 minute Sony audio cassettes
- Sony DVCAM PD100P camera
- 2 x Sony Mini DV 30 minute tapes

The completion of Phase Two, the development of a tool for parents on the stimulation of communication skills in infants, required the following equipment:

- IBM workstation Pentium III
- Avid Xpress software
- Corel 9
- Photoshop 5.5
- Sony DVCAM PD100P camera
- 3 x Sony Mini DV 60 minute tapes
- Avid XPress Editing Suite

4.8 PROCEDURES FOR DATA COLLECTION

The procedures observed to conduct the research include the procedures that were followed during Phase One, Two and Three.

4.8.1 Procedures for Data Collection during Phase One

Data collection during Phase One included a survey as well as focus group discussions. The procedures followed during each are described forthwith.

.1 Procedures for the survey

- Participants were approached according to the procedures described in section 4.6.2, point 2.
- The only information that was supplied to the participants during data collection was contained in the *informed consent form* (see Appendix A). The informed consent form provided information on the purpose of the research, the procedures followed, confidentiality and consent (Stein & Cutler, 1996). No additional information was supplied verbally.
- If participants granted consent to participate in the study they were given a questionnaire to complete. Parent participants were supplied with Questionnaire 1 (see Appendix B) and professional participants were supplied with Questionnaire 2 (see Appendix C).
- In the case of Questionnaire 1 (parent participants) the researcher waited and questionnaires were collected immediately upon completion.
- In the case of Questionnaire 2 (professional participants) the researcher returned at a later date to collect the completed forms. This was done as many professionals were not able to fill in the questionnaire immediately, due to time constraints.
- Even though the researcher collected the questionnaires in person the confidentiality of all participants was ensured by placing the questionnaires into a sealed box until all the questionnaires were collected.

.2 Procedures for the focus groups

Two focus group discussions for parents were conducted in Phase One of the research. Participants for the focus group discussions were selected according to the procedures described in section 4.6.2, point 2. The participants took part in the focus group discussions immediately after completing their individual questionnaires. The

researcher, who acted as group leader in the focus group discussions, therefore did not know what information was supplied in the individual questionnaires and could not be biased towards any individual as a result of opinions expressed in the survey. The aims and procedures of the focus group discussions that were held during Phase One are described in Table 4.5.

Table 4.5 Procedures followed during Phase One focus group discussions

CATEGORY	DESCRIPTION
Aims	<ul style="list-style-type: none"> • The principles of participatory action research were employed as the parents themselves were provided with the opportunity to participate in the process of formulation of the tool (Denzin & Lincoln, 1998b). • The aim of the first part of the discussions was to determine whether the participants of the focus groups felt there was a need for a tool for parents on the stimulation of communication skills in infants. • The aim of the second part of the discussions was to determine which format the participants of the focus groups felt would be the best option for a tool for parents on the stimulation of communication skills in infants. • The aim of the third part of the discussions was to determine which content the participants of the focus groups felt should be included in a tool for parents on the stimulation of communication skills in infants.
Procedures	<ul style="list-style-type: none"> • As a pre-existing social group was used, the venue for the discussion was the same as where the group usually gathered. This was ideal as it was a familiar and convenient setting for the participants (Bloor et al., 2001). • Due to the fact that pre-existing parent-infant groups were used for the discussions, the parents had all met each other previously. However, the researcher needed to meet the participants and provision was made for a period of time where the group could converse socially first. Establishing a friendly atmosphere and good rapport between participants is essential to the effectiveness of focus group discussions (Berg, 1998). After a fifteen minute tea-time the discussion started. • The external rater observed the focus group discussions. • The participants all sat in a circle so that every member could participate fully. • Questions from Section B of Questionnaire 1 were used to prompt discussion. • At the end of the discussions the participants were debriefed. The participants were once again ensured that their names would be held confidential and that all recordings would only be used to transcribe the data (Bloor et al., 2001).

The discussions were taped on audio and video cassettes and transcribed verbatim according to the following guidelines provided by Bloor, et al. (2001):

- All recorded speech, including unfinished and interrupted sentences and short utterances of agreement or disagreement, were transcribed as accurately as possible.
- Transcriptions reflected the discussions as they really occurred and not a tidied up version thereof. Words such as “um” and “ah” were, therefore, included.
- Other oral communication, such as laughter, was also noted.
- As far as possible the speaker was identified in the transcription.
- For the sake of keeping the identities of the participants anonymous the transcriptions refer to the members as Participant A, Participant B, etc.

The complete transcriptions of the two focus group discussions of Phase One are included in the appendices (Appendices D and E).

4.8.2 Procedures for Data Collection during Phase Two

Three focus group discussions for parents were conducted in Phase Two of the research. One of the parent-infant workshop groups participated in repeated discussions in order to help develop the tool. One of the benefits of using groups of peers to generate discussion is that there is an increase in social integration and retention of information (Kerka, 1995).

The aims and procedures of the focus group discussions that were held during Phase Two are described in Table 4.6.

Table 4.6 Procedures followed during Phase Two focus group discussions

CATEGORY	DESCRIPTION
Aims	<ul style="list-style-type: none"> • These focus group discussions gave the parents an opportunity to discuss the results from Phase One, comparing and reflecting on their needs, allowing new viewpoints to evolve (Bloor et al., 2001). • The aim of the first discussion was to narrow down the number of different topics to be included in the tool. • The aim of the second discussion was to determine how parents wanted the information to be presented to them. Additionally, the researcher aimed to determine how parents would feel about a tool that met the requirements of content and presentation that they were specified in the first two discussions. • The aim of the third discussion was to determine the type of information that should be included in the discussions.
Procedures	<ul style="list-style-type: none"> • Once again a pre-existing social group was used and provision was made for a period of time where the group could converse socially first in order to establish rapport (Berg, 1998). • The external rater observed the focus group discussions. • The participants all sat in a circle so that every member could participate fully. • During the first discussion the researcher presented the participants with the aim of the tool as well as with the different topics that had been identified during Phase One as possible topics to include. Participants were requested to indicate which of the topics they felt should definitely be included in the final tool. • During the second discussion the researcher showed the participants several possible inserts in the tool. Each insert used a combination of different presentation techniques. The techniques that were demonstrated included the following: video footage with a voice over giving commentary; video footage without a voice over (the mother's voice was audible); cartoon strips and slides. Furthermore, the participants were asked to summarise in one word their feelings about obtaining such a tool. • During the third discussion the researcher once again showed the participants video footage. This time the participants were asked to comment on the information that was given and think of alternatives. • At the end of the discussions the participants were debriefed. The participants were once again ensured that their names would be held confidential and that all recordings would only be used to transcribe the data (Bloor et al., 2001).

Once again the discussions were recorded on audio and video tape and transcribed verbatim according to set guidelines, as described for Phase One (Bloor et al., 2001). The complete transcriptions of the three focus group discussions that were held during Phase Two are included in the appendices (Appendices F, G and H).

4.8.3 Procedures for Data Collection during Phase Three

Three focus group discussions for parents were conducted in Phase Three of the research. Three parent-infant groups were requested to participate in discussions aimed at determining whether the tool that was developed in Phase Two met the needs of parents from the community. The discussions were recorded on audio and video tape and transcribed verbatim. The same transcription guidelines applied as in Phases One and Two.

The aims and procedures of the focus group discussions that were held during Phase Three are described in Table 4.7. Once again the discussions were recorded on audio and video tape and transcribed verbatim according to set guidelines (Bloor et al., 2001), as described for Phase One. The complete transcriptions of the three focus group discussions that were held during Phase Three are included in the appendices (Appendices I, J and K).

Table 4.7 Procedures followed during Phase Three focus group discussions

CATEGORY	DESCRIPTION
Aims	<ul style="list-style-type: none"> • The principles of participatory action research were employed as the parents themselves were provided with the opportunity to participate in the process of tool validation (Denzin & Lincoln, 1998b). • The first aim of these discussions was to determine whether the format of the tool met the needs of the parents in the community. • The second aim of these discussions was to determine whether the topics that were included in the tool, met the needs of the parents in the community. • The third aim of these discussions was to determine whether any further enhancements had to be made to the tool.

Table 4.7 Continued

CATEGORY	DESCRIPTION
Procedures	<ul style="list-style-type: none"> • As pre-existing social groups were used, the venue for the discussion was the same as where the groups usually gathered. • Due to the fact that pre-existing parent-infant groups were used for the discussions the parents had all met each other previously. However, the researcher needed to meet the participants and provision was made for a period of time where the group could converse socially first in order to establish rapport (Berg, 1998). • After a fifteen minute tea-time the group studied the tool together. The group did not discuss the tool until they had finished studying it. • After viewing the tool the discussions started. • The external rater observed the focus group discussions. • The participants all sat in a circle so that every member could participate fully. • The researcher prompted discussion about the tool's format, the topics that were addressed in the tool as well as whether participants felt that any enhancements were necessary. • At the end of the discussions the participants were debriefed. The participants were once again reassured that their names would be held confidential and that all recordings would only be used to transcribe the data (Bloor et al., 2001).

4.9 DATA ANALYSIS

This research combined the use of surveys with the use of focus group discussions, in order to have a more in-depth view of the needs of the community. Therefore both quantitative and qualitative analysis techniques were used. The data was analysed according to the aims of the phases of the study, namely the needs analysis completed in Phase One, the development of the tool in Phase Two and the validation of the tool in Phase Three.

4.9.1 Statistical Analysis of the Data

The statistical analysis of the data provided a broader, quantitative view of the data. The statistical analyses that are most suited to the description of survey data are *exploratory statistics* which explore general tendencies within a group (Dane, 1990; Leedy & Ormrod, 2001). This includes statistical computations such as *frequency distribution displays* and measures of *central tendency* and *variability* (Dane, 1990;

Leedy & Ormrod, 2001). The *median value*, or 50th percentile score for a set of data, is the measure of central tendency that is used in this study (Dane, 1990; Leedy & Ormrod, 2001). The frequency distribution and median values provided an indication of the opinions of the whole group. This was important to the researcher as it addressed the objectives of the first phase of the research, namely to identify trends within the community. The completion of the survey and the coding of the survey results were observed and checked by the external rater. The statistical results are described in the text and displayed in tables, graphs and pie-charts (Stein & Cutler, 1996).

4.9.2 Qualitative Analysis of the Data

The use of both quantitative as well as qualitative measures allows for researchers in the social sciences to do more practical, clinically-based research (Berg, 1998). The qualitative analysis of data is especially well suited to research which is concerned with exploring the needs of participants in their natural setting where the researcher and the participants are a subjective part of the process (Creswell, 1998). This was certainly the case in the current research as the aim was to explore the needs of a specific community by actively involving the community in developing a solution.

Descriptive statistics were used to describe trends in both the survey data and the focus group discussions. Not only were the main trends in the survey results summarised, but interesting points that were highlighted in individual questionnaires were also discussed. The results of the open questions in Questionnaires 1 and 2 provided very informative viewpoints when described, but could not be analysed meaningfully by means of descriptive statistics as the responses were very varied.

The results of the focus group discussions provided the researcher with a richer, more in-depth view of the opinions and preferences of the participants (Bloor et al., 2001). The following procedures were followed in the data analysis of the focus group discussions:

- The external rater observed the focus group discussions.

- The two raters (the researcher and the external rater) then transcribed the recordings according to the rules described in 4.7.
- The transcriptions were then compared and discussed until 100% agreement was obtained. Points of disagreement were clarified once the two raters had worked through the recordings and transcriptions together.
- The data was systematically analysed, using indexing, in order to identify themes in the discussions (Bloor et al., 2001). The identification of themes in group discussions is an important qualitative analysis tool whether used in isolation or, as was the case in this research, when used to confirm or contrast quantitative research findings (Miles & Huberman, 1994).

The researcher also made use of a research diary in which the entire research process was documented (Silverman, 2000). The use of the researcher's own notes as a guideline to the analysis of the data is a well-documented qualitative method (Creswell, 1998). Describing the social setting for group discussions provides the researcher with insights into the findings (Creswell, 1998). In this research a diary was used to note every step and procedure along with the researcher's own perceptions. This was a useful tool that documented the researcher's experiences and assisted in the reflection on, and evaluation of the study (Silverman, 2000). This provided valuable qualitative information on the research. An example of an entry in the research diary is included in the Appendices (see Appendix L). From this entry it can be observed that the researcher used this tool to note perceptions on the value of a particular focus group discussion. This information was then used, at a later date, to reflect on and interpret the findings of the discussion (Silverman, 2000; Creswell, 1998). An example is the researcher's notation that the discussion was lively and that all the participants took part in the discussion. These observations were later noted in the results of the focus group discussion, verifying that the research diary was, in fact, a valuable tool in the qualitative analysis of the data.

A final and essential qualitative tool is the evaluation of researcher effects and bias (Miles & Huberman, 1994). This determines the true value of the research.

4.10 VALIDITY, RELIABILITY AND TRUSTWORTHINESS ISSUES

In order to achieve the aims and objectives of the research, the researcher utilised both quantitative as well as qualitative research methods (Leedy & Ormrod, 2001). The use of triangulation, when multiple sources are used to gather data, increases the validity and trustworthiness of the data, and therefore, the results of a study (Leedy & Ormrod, 2001; Berg, 1998; Miles & Huberman, 1994). From a constructivist paradigm the use of multiple methods, or triangulation, reflects an attempt to obtain an in-depth understanding of the data (Denzin & Lincoln, 2000).

The combination of quantitative and qualitative methods is used to provide greater richness and depth to this research (Denzin & Lincoln, 2000). However, although quantitative and qualitative research methods are combined, the means for determining the quality of the data which is obtained through these methods are vastly different (Denzin & Lincoln, 2000).

4.10.1 The validity and reliability of quantitative data

The conclusions which are made from quantitative research methods are only deemed meaningful if the results that are obtained are accurate and reliable. The reliability of the results is related to the validity and reliability of the instruments and procedures that are used to obtain the data (Leedy & Ormrod, 2001). In this research surveys were used to collect data. Certain precautions were taken in order to ensure that validity and reliability of the data collected.

.1 Validity

The *validity* reflects the truthfulness of the data or the extent to which a tool measures what it claims to measure (Olswang & Bain, 1994; Maxwell & Satake, 1997). Survey research allows the researcher to gather information on opinions and attitudes without influencing the judgements of the participants and simultaneously ensuring high levels of internal and external validity (Leedy & Ormrod, 2001). One precaution that was used in this study to ensure that the opinions of the participants were not influenced by the researcher included the use of a cover letter. The cover letter

provided all the necessary information to the survey participants, thus ensuring that the researcher did not need to discuss or clarify anything. Any discussions between the researcher and the participants, prior to the completion of the questionnaires may have influenced the judgements of the participants, but was prevented by the use of a cover letter.

Content validity refers to the extent to which the instrument obtains a representative sample of the area being measured (Neuman, 1997; Leedy & Ormrod, 2001). Aspects such as the number of questions on a topic or the variety of possible replies to a question could, therefore, affect content validity as these aspects influence the extent to which the data represents the truth (de Vos, 1998; Neuman, 1997; Leedy & Ormrod, 2001). The questionnaires that were developed in the current research addressed the same topics in more than one question and provided the recommended number of responses in closed-set questions (Leedy & Ormrod, 2001). These precautions helped to ensure a high level of content validity in the survey.

Construct validity refers to the extent to which the instrument measures aspects such as the need for a tool, that cannot be observed directly (Leedy & Ormrod, 2001). The construct validity of the questionnaires was, therefore, influenced by the participants' subjective awareness of their needs as well as the wording used in the questions.

The content and construct validity of the questionnaires was determined in the pilot study and, according to the recommendations that were made the punctuation in certain questions was changed. The use of a pilot study therefore increased the validity of the results by making sure the questions were clear and unambiguous (Neuman, 1997; Maxwell & Satake, 1997).

External validity refers to the extent to which one can generalise the results of a study to the larger population (Leedy & Ormrod, 2001). As this study targeted a very specific population the results could not be generalised to the population at large. Based on the criteria that were used in the selection of participants, certain inferences and predictions can, however, be made about similar communities (Stein & Cutler, 1996).

.2 Reliability

Reliability reflects the extent to which measurements over time will yield the same results (Olswang & Bain, 1994). There were strict guidelines for the procedures to be followed when completing the survey and the researcher made use of an experienced external rater. The test-retest reliability in this study should therefore be high (Leedy & Ormrod, 2001).

Reliability is reflected in the ability to yield the same results when the characteristic that is being measured has not changed (Leedy & Ormrod, 2001). In order to increase the reliability of the data specific precautions were built into the methodological procedures. By determining the procedures that were followed in the data collection beforehand, and providing a detailed description there-of in the methodology, the ability to yield the same results again increases. The researcher's detailed planning of, and transparency regarding procedures followed, therefore increases the reliability of the results (Neuman, 1997). Furthermore a large number of participants were included in this study, thereby further increasing the reliability of the results (Leedy & Ormrod, 2001).

When constructing the questionnaires the researcher also checked for consistency in the participant responses by making use of countercheck questions (Leedy & Ormrod, 2001). The researcher asked the participants for their opinion on specific issues in more than one question, using different wording. This ensured that responses to questions in the survey were a true reflection of the needs and preferences of the participants and that the results were not skewed by misinterpretations of the questions.

4.10.2 The trustworthiness of qualitative data

This research relied heavily upon qualitative data which was obtained through focus group discussions. The value of qualitative research lies in the local groundedness of the data, where the research is embedded within the context and data reveals the rich complexity of phenomena (Denzin & Lincoln, 2000; Berg, 1998). The fact that qualitative data is complex, with the researcher forming a subjective part of the

research process, does not, however, minimise the need to determine the trustworthiness of the data (Berg, 1998). The trustworthiness of qualitative data can be described as the plausibility/credibility, sturdiness/dependability and confirmability of the data (Miles & Huberman, 1994).

The plausibility or credibility of the data reflects whether the findings are an authentic representation of phenomena (Berg, 1998; Miles & Huberman, 1994). The use of focus groups provided participants with the opportunity to express needs and preferences that could not be expressed in the survey and also allowed for new ideas to develop or for a group consensus to be achieved (Bloor et al., 2001; Carey, 1994). The researcher compared the results from an extensive survey with information gained through repeated focus group discussions, thereby limiting the effects of bias from the individual methods and increasing the richness and complexity of the data and, consequently, increasing the credibility of the findings (Denzin & Lincoln, 2000; Bloor et al., 2001; Carey, 1994; Berg, 1998). The use of repeated focus group discussions in each research phase also increases the credibility of the final conclusions (Bloor et al., 2001; Carey, 1994; Berg, 1998).

Furthermore, the research process was also divided into different phases with the needs and preferences of the community clearly highlighted in the objectives of the focus group discussions. This allowed the participants themselves to be actively involved in the decision-making process in each phase, thereby increasing the credibility and trustworthiness of the final results (Denzin & Lincoln, 2000; de Vos, 1998).

The sturdiness or dependability of the data reflects whether there was consistency in the procedures which were followed. The dependability of the findings can be increased by providing a thorough procedural account of the procedures and analysis, explaining how the researcher progressed from the focus group recordings and transcriptions to the final conclusions which were drawn (Miles & Huberman, 1994). By determining the procedures that were followed in the focus group discussions beforehand and providing a detailed description there-of in the methodology, the dependability of the data was augmented. The researcher's detailed planning of, and

transparency regarding procedures followed, therefore increases the trustworthiness of the results.

Trustworthiness can be further increased when the confirmability of the data is augmented. This can be achieved when data is reviewed by more than one individual, giving rise to discussion, review and, eventually, consensus (Miles & Huberman, 1994). In this research this aim was achieved through the use of an experienced, trained external rater. The external rater observed all the focus group discussions. The two raters (the researcher and the external rater) subsequently transcribed the recordings according to a stringent set of transcription rules (as discussed in 4.8.1). The transcriptions were then compared and discussed until 100% agreement was obtained. The external rater also double-checked the coding on all the questionnaires. Differences were once again discussed until 100% agreement was secured. A high level of inter-rater reliability was achieved through this thorough process. This increased the confirmability and trustworthiness of the results.

Issues related to validity, reliability and trustworthiness were central to the study and were thus treated with priority in order to increase the value of the research (Leedy & Ormrod, 2001; Miles & Huberman, 1994).

4.11 ETHICAL ISSUES

Participatory action research relies on the inputs of the individual participants (Denzin & Lincoln, 1998b). When dealing with people, however, certain ethical considerations must be taken into account. Four important ethical issues for consideration are the protection from harm, the right to privacy, honesty with professional colleagues and informed consent (Leedy & Ormrod, 2001).

The risks of participating in this study were minimal as it was no greater than normally encountered in everyday life (Maxwell & Satake, 1997). When considering the risk/benefit ratio (Maxwell & Satake, 1997) of participating in this study it is important to consider the following: there was a risk involved for the parents and professionals in expressing opinions that may not be popular as well as of increased anxiety levels for parents who may have become concerned about their own child's

communication development as a result of their participation in the study. With regard to the first point the researcher assured all participants that they would remain anonymous to ensure that honest opinions were expressed without fear of condemnation. The researcher ensured their privacy by allocating a number to each individual (Leedy & Ormrod, 2001). With regard to the second point, the benefit of having access to the final tool as well as the researcher's willingness to answer questions after the completion of the questionnaires should have counteracted any possible anxiety. Having access to information is important and reassuring to new mothers (Wendland-Carro, Piccinini & Millar, 1999) which applies to all of the female focus group participants.

All participants were informed of the nature of the research project and participation was voluntary (Leedy & Ormrod, 2001). Participants were free to withdraw at any stage. The researcher made use of an informed consent form (see appendix A) to describe the purpose of the study, the storage of data and the implications of participation (Stein & Cutler, 1996). This was done to increase transparency thereby ensuring that consent was truly *informed*.

4.12 CONCLUSION

The research problem that was addressed in this study concerned the development of a tool for parents on the stimulation of communication skills in infants. Using a constructivist paradigm the researcher aimed to actively involve participants from the community in the process of determining the needs and desires of a specific community, developing a tool on infant stimulation for the parents of the community in accordance with these needs, and, finally, validating this tool. Procedures for focus group discussions and survey questionnaires which were based on sound theoretical underpinnings were developed by careful planning and consultations with other professionals. The researcher aimed to generate a rich database by involving a large proportion of the community in a survey as well as repeated focus group discussions.

The active involvement of the community in identifying and finding practical solutions for real needs resulted in the development of a tool for the community. This research therefore addressed the need for applied research which bridges the gap

between theory and practice, resulting in better service provision within the community.

However, this study has the potential to act as the foundation for the development of similar tools for other South African communities. Chapter Five presents and discusses the results of the different phases that were described in the methodology, according to the objectives that were highlighted in Chapter Four.

4.13 SUMMARY

This chapter provided a detailed description of the research methodology that was followed in this study. The main aim of the research was elucidated by the objectives of each of the three research phases and supported by an applicable research design. The criteria for selection as well as a description of the participants for each research phase were provided. The materials and apparatus that were needed for the study were described as well as the procedures that were followed during data collection and data analysis. Finally, issues relating to validity, reliability and ethics were addressed. A detailed description of the methodology provides a framework for the results.