

CHAPTER 3

Research methodology

3.1 INTRODUCTION

In the previous chapter a literature review was given on TB as a health problem, the treatment thereof and the implementation of the DOTS strategy internationally, nationally and in KwaZulu-Natal. The efficacy of the strategy was also discussed. Researchers indicated that self administration therapy failed, as it lead to a high treatment interruption rate, high morbidity and mortality rates, as well as MDR TB, which is very expensive to treat. The high TB prevalence rate resulted in high mortality rates especially in KwaZulu-Natal province as this province has also the highest incidence of HIV/AIDS. The DOTS strategy has proved to be the only solution to the TB epidemic in other countries and as a result, its efficacy also had to be evaluated in the North South Central Health district of KwaZulu-Natal.

In this chapter the methodology which was used in this research to determine the efficacy of the DOTS strategy is discussed.

3.2 DELIMITATION OF THE RESEARCH

The focus of this study was on health institutions involved in the implementation of the DOTS strategy in the North South Central Health district of KwaZulu-Natal province. The institutions which were included in the study were those that kept TB registers such as Umlazi Chest Clinic, Kwamashu Chest Clinic and King George V Hospital.

3.3 GEOGRAPHICAL AREA

KwaZulu-Natal province is one of nine provinces of the Republic of South Africa. It covers a geographical area of 2 302 square km and there are about 1 195 people per square km in this province. The mid-year population of KwaZulu-Natal for 1998 was 8 726 300 which was 20,7 percent of the country's population making it the highest populated province in the country. About 57 percent of the people were living in a non-urban area. There were more females (53,15 percent) than males (46,85 percent). In other words there were 88 males per 100 females. About 87 percent of the people were African, 9,4 percent Indians, 6,6 percent Whites and 1,4 percent Coloureds. More than 37 percent of the people of KwaZulu-Natal live in the Ilembe (Durban) region, which is the smallest region (5,3 percent of the total land) (Department of Health, Kwazulu-Natal 1998-1999:1).

KwaZulu-Natal province has seven regions, namely Ilembe, Uthungulu, Ulundi, Umzinyathi, Uthukela, Indlovu and the Ugu region. The North South Central Health district falls under Ilembe region. Approximately 1 734 391 people resided in this district in the period 1999 to 2000 which were 19,44 percent of the total population of the province. In this district at that time, there were also more females than males, as 889 136 of the population were females which comprised 51,27 percent of the population and 845 255 were males which was 48,73 percent of the population (Health Information Bulletin 1999-2000:18). The North South Central Health district is an urban area, which comprises of people who are partly employed. These people live in well-built permanent houses.

In this district there are also inhabitants who moved from the rural areas seeking employment in the cities and towns. Due to unavailability of accommodation in urban areas, these people live in squatter camps and after a while also tend to bring their families to live with them. This situation causes serious problems for the local government as they cannot provide health services to the growing numbers of people. In these conditions where people live in overcrowded shacks, communicable diseases are rife and social problems are common.

3.4 RESEARCH DESIGN

The research design refers to the researcher's overall plan for obtaining answers to the research questions and testing the research hypothesis (Polit & Hungler 1999:225). A quantitative, descriptive cross sectional research design was used for this research because it was flexible and a lot of information could be gathered during the course of the research (Polit et al 2001:167; Polit & Hungler 1999:195).

3.4.1 Quantitative research

Quantitative research is the investigation of phenomena that lead themselves to precise measurement and qualification, often involving a rigorous and controlled design (Polit & Hungler 1999:712; Polit et al 2001:167).

The quantitative research approach is one of the scientific methods of obtaining information (Brink 1996:5). It involves the systematic collection of numerical information, often under conditions of considerable control, and the analysis of that information using statistical procedures (Polit & Hungler 1999:24). This approach which include structural procedures, a formal instrument to collect data, and the procedures followed to analyse the data, was considered the best suited for this research design (Polit & Hungler 1999:193). Characteristics of quantitative research approach have been discussed below.

3.4.1.1 Characteristics of quantitative research

Characteristics of quantitative research approach which makes it most suitable for this research are as follows:

- This research began with preconceived ideas obtained from the literature and experience of the researcher about how the concepts were interrelated.
- The research used structured procedures and a formal instrument to collect information.
- The researcher collected the information under conditions of control using a copy of the same instrument for each respondent during the interviews.
- The interview schedule consisted mainly of closed-ended questions and the interview schedules were analysed by computer to ensure objectivity in the collection and analysis of information.
- The numerical information obtained from the interview schedule was analysed through statistical procedures. The open questions were categorised by the researcher and then analysed and discussed.
- The researcher collected the data by asking the questions included in the interview schedule and dotted down the responses of the participants. The researcher did not participate in the events under investigation but had to clarify the questions for the participants and translate the questions into their home language where necessary (Polit & Hungler 1991:24).

3.4.2 Cross-sectional research

In cross-sectional research data is collected at one point in time. This type of research is especially appropriate for describing the status of the phenomena at a certain fixed point. The most important advantage of cross-sectional research is that it is economical and easy to manage. Trends may however change over time which makes it difficult to generalise findings. In this research a phenomenon has been studied within a certain context. The effectiveness of the DOTS strategy was investigated by interviewing TB patients in the North South Central Health district of KwaZulu-Natal province on their opinions and experiences of the DOTS strategy (Polit et al 2001:185).

3.5 RESEARCH POPULATION

A research population is the entire group of persons or objects that are of interest to the researcher which in this research would mean patients with pulmonary TB.

KwaZulu-Natal province had 20 683 cases of pulmonary TB in the period April 1999 to March 2000, which confirmed 79,05 percent of the total TB cases. Primary TB cases were 1 907 which comprised 7,4 percent of all TB cases. Other TB cases being 3 245 (12,6 percent) and the total number of all TB cases in KwaZulu-Natal province were 25 835 for March 1999 to April 2000.

The individuals who met the criteria in which the researcher was interested in studying were included (Brink 1996:321). The institutions where the research population could be found were King George V Hospital, Umlazi Chest Clinic and Kwamashu Chest Clinic. These institutions were chosen because they only deal with TB patients and are in the North South Central Health district of KwaZulu-Natal.

In this district, there were 5 800 TB cases in 1999 to 2000 which comprised 22,5 percent of the total TB cases in KwaZulu-Natal province. The study population for this research was TB patients registered in the National TB Register of North South Central Health district, who have had a previous TB infection before the implementation of the DOTS strategy and have been under supervision of the DOTS strategy with their latest or current TB infection.

Sampling, advantages and disadvantages of purposive sampling method, criteria set for a respondent to be included in the sample and sampling method used in this research are discussed below.

3.6 SAMPLING

As it is often impossible to study the whole population, researchers make use of a sample to select research subjects who would represent the whole research population. A sample is therefore a subset of a population selected to participate in a research study (Polit & Hungler 1995:445; Polit et al

2001:234). This refers to the sum of those individuals within a specific territory, or a small portion of a population, a smaller representation of a larger whole, intended to reflect and represent the character, style or content of a population from which it is drawn (Brink 1996:133). According to Polit and Hungler (1993:184), researchers using the quantitative research methodology are advised to use the largest sample possible, as the larger the sample the more the representative the research will be (Polit et al 2001:235).

To enable the researcher to obtain a sample of suitable TB patients for the study the researcher used the purposive sampling method to select the participants. This sampling method is discussed below.

3.6.1 Sampling method

A sampling method is the process of selecting the sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Brink 1996:133). A sampling method is thus a way devised to select the population eligible for the research study (Polit et al 2001:236).

The sample was a purposive sample as mentioned before as the researcher consciously selected certain TB patients for their attributes to take part in the research.

The purposive sampling method was chosen as the most appropriate method for this research, as the researcher could apply her knowledge of the research problem to handpick the participants from a TB register to be typical of the population in question. The burden of the judgment of who should be included in the sample remained with the researcher. It was also, according to Brink (1996:135) more convenient and economical than other sampling methods.

A disadvantage of this sampling method was that it did not contribute to generalisation. This was expected as the study was done in the North South Central Health district of KwaZulu-Natal and the findings might not be the same in other regions, cultural groups or socio-economic circumstances. Although the extent of the sampling error could not be estimated and bias might be present, the researcher could always, according to Brink (1996:135), work out a plan to circumvent or minimise them. In this research some measures were taken to ensure reliability and validity which were discussed in this chapter to minimise bias (Polit et al 2001:240).

The suitable participants were identified by the researcher using the TB registers and then their treatment supporters were contacted telephonically and some who could not be reached by telephone were visited personally by the researcher to ask their advice and get their consent and cooperation.

The treatment supporters, in turn, then identified their TB patients and confirmed that they were suitable participants for this research. The participants were then contacted telephonically and personally by the researcher as well as the treatment supporters as the TB patients had confidence in their treatment supporters. The patients were informed that their participation was not compulsory. The researcher also explained to the participants what their rights and responsibilities were if they should decide to take part in the research (as discussed in this chapter) and were also requested to sign an informed consent form (see annexure D).

All the patients included in the sample were interested to participate in the study. An appointment was made with each of the participants which would suite them and they were provided with the transport fare to allow them to come for the study to their respective clinics on the planned dates.

3.6.2 Sample size

According to Brink (1996:142-143), the number of participants in quantitative research included in the sample is important as it is often stated that the larger the sample the better. There are factors to be considered when determining the sample size, such as the precision of the data collection instrument, (the less precise the tool, the larger the sample needed). Heterogeneity of the population also affects the sample size. As the number of demographic variables increase, so must the sample size (Polit et al 2001:244).

Forty participants, (20 females and 20 males) were selected from each register. As the study was conducted in three different institutions, each institution had its own register which means that three registers were used to select participants for the study. A total of 120 participants were ultimately selected for the research study.

This sample is much smaller than the recommended sample for quantitative research, but seeing that this is a dissertation of limited scope, and that TB patients who have experienced the previous TB therapy method **as well as** the DOTS strategy were used as a sample, a sample size of 120 was considered to be large enough. Unfortunately two (2) of the participants did not respond and there were ultimately only 118 participants in the study.

3.6.3 Advantages of the purposive sampling method

Non-probability sampling is a sampling approach which is less likely than probability sampling to produce accurate and representative samples, despite that, it is mostly used in nursing research. The researcher used the purposive sampling method as discussed because

- the researcher was able to judge the subjects that were typical or representative of the phenomenon being studied.

- the researcher was able to choose subjects that were knowledgeable about the research at issue because of their own personal experience.
- the data collected could be very informative for this research (Brink 1996:141).
- it was convenient and economical as the researcher was the only one involved in the selection. (Polit & Hungler 1999:281; Polit et al 2001:233).

3.6.4 Disadvantages of the purposive sampling method

- The researcher knew that the sample selected may not represent the total TB population and that it would limit the generalisation of the findings. There was also the potential for sampling bias. The researcher however decided that it would be the most suitable method to use and that the criteria set for a respondent to be selected for inclusion in the sample would be followed closely (Brink 1996:141).

3.6.5 Criteria set for a respondent to be included in the sample

The researcher decided that the participants should have the following attributes to be included in the research. The participants should

- currently be suffering from pulmonary TB and be on the National TB Register of the North South Central Health district
- have been treated for TB before the DOTS strategy was implemented
- have been under supervision of the DOTS strategy and have a green card which was signed by their treatment supporter to indicate that they were under supervision
- be willing to take part in the research
- be living in the North South Central Health district of KwaZulu-Natal and be attending the following clinics: King George V Hospital, Umlazi Chest Clinic or Kwamashu Chest Clinic

- be teenagers or adults, no children were included in the sample

3.7 DATA COLLECTION METHOD

In quantitative research, a researcher moves from the beginning point of a study to the end point in a logical sequence of predetermined steps that are similar across studies, that means from the posing of a question to the obtaining of an answer (Polit & Hungler 1999:35; Polit et al 2001:263)

3.7.1 Interviews

An interview is a method of data collection in which one person (the interviewer) asks questions from the other (a respondent), interviews are conducted either face-to-face or by telephone (Polit & Hungler 1991:647).

The most important advantage of an interview for this research was that it was a flexible method of data collection, best suited for the particular sample of this research as many participants were illiterate or semi-illiterate. Another important advantage was that the researcher could also explain and expatiate on questions, what they imply, in case they were not clear to the participants. Unfortunately interview bias was an unavoidable possibility. The researcher interviewed the participants herself and did not make use of other interviewers to address this problem, and tried to stick as closely as possible to the questions included in the interview schedule. In the open questions the researcher wrote the responses of the participants verbatim. Another disadvantage was that the interview method was time consuming, as the researcher herself had to interview each participant personally (Polit et al 2001:267).

As mentioned before, after the participants were selected, they were briefed on the objectives of the research, and their rights. An appointment was made with each of these participants to visit the TB clinic, they usually visit. Permission was obtained from the King George V Hospital, Umlazi Chest Clinic or Kwamashu Chest Clinic to use their facilities for the interviews (see annexure B).

On the day of the particular appointment the researcher visited the relevant clinic where a room was allocated for this purpose. Again the participants were briefed about their rights, as discussed in section 3.8 of this chapter, and their written consent was obtained (see annexure C). After the interview the participants were asked whether they wanted to ask any questions and then they were thanked for their participation and reimbursed for their travelling expenses.

The research instrument used to collect data has been discussed below.

3.7.2 Research instrument

A structured approach is appropriate, when the researcher knows in advance exactly what needs to be known and can then frame appropriate questions to obtain the needed information. Structured data are usually collected by means of a formal, written document referred to as an instrument. The instrument used in this research is known as the interview schedule when the questions are asked orally, as in this case, a face-to-face situation. (Polit & Hungler 1991:365; Polit et al 2001:276). Interviews were conducted using a prepared interview schedule. Patient records were also used in this study for data collection.

3.7.3 Interview schedule

An interview schedule has been compiled to collect the data required to obtain the objectives of the research. The objectives were also used as framework for the schedule.

The researcher decided to make use of a preplanned and compiled interview schedule, which included open and closed questions to use during the interview as many of the participants were illiterate.

The structured or closed questions produced standardised answers, which could easily be coded and analysed by computer. These questions unfortunately also elicited predetermined answers and were therefore rigid.

Unstructured or open questions were also included to allow the participants to give their own opinion, views, beliefs and other information freely. These questions were placed in particular places in the questionnaire as not to have the participants influenced by other questions. This allowed the researcher to do control checks on some of the data gathered.

The interview schedule had the added advantage that the participants need not be able to read or write. Non-verbal behaviour and mannerisms could be observed although it was not recorded and only used as indication that the participant might not have understood the questions. The questions were then clarified if they were misunderstood (Brink 1996:153). Fortunately no training programmes with co-researchers were necessary since the research was conducted by the researcher only. Interviews were however time consuming and expensive for the researcher and the arrangements for interviews were difficult to make as time had to be found that would suit the clinic, respondent and researcher.

Three of the objectives set for the research which involved the TB patients themselves (see chapter 1) were directly related to the objectives of the DOTS strategy, namely to

- evaluate the level of knowledge of the TB patient in the North South Central Health district of KwaZulu-Natal about TB
- identify the improvement in the stigma of TB in the North South Central Health district of KwaZulu-Natal
- explore the opinions of the TB patient in the North South Central Health district of KwaZulu-Natal of the DOTS strategy

To enable the researcher to collect data directly related to the research and the objectives, the researcher designed the interview schedule into the following sections:

- Biographical information of the respondent, which was aimed at identifying other contributing factors which could play a role in the disease profile such as employment and personal habits.
- The knowledge of the TB patient. Questions such as cause, mode of spread, signs and symptoms, have been included to establish whether the DOTS strategy was effective in increasing the knowledge of the TB patient. This section also explored the opinion of the respondents on the following: what they believed TB patients in general would know about TB and other matters; how they felt these people would react in certain situations and what their beliefs on certain matters were; what the respondents, themselves knew, experienced, reacted and believed during their previous infection and therapy as well as their personal knowledge, experiences and beliefs during the current infection and how it might have changed since the implementation of the DOTS strategy.
- The DOTS strategy has, as one of its objectives to eradicate the stigma attached to the disease. Questions have been included to determine the perception of the TB patient about the stigma attached to TB, and to what extent the TB patients were accepted, supported or rejected by family, co-workers and friends.
- The experience and opinion of the treatment received prior to the DOTS strategy and during the implementation of the DOTS strategy.
- The level of satisfaction of the TB patient with regard to the treatment supervisor.

The pre-testing of the instrument used for this study was done by using five (5) respondents who did not take part in the major research project but did have all the attributes required for inclusion in the sample. The instrument was pre-tested to ensure that unforeseen problems could be detected early. Problems that were identified were *inter alia* mistakes in the numbering of some of the questions as well as the coding of the responses. A few typing errors were also identified and corrected. The pre-tested

interview schedule was then returned to the supervisors for further scrutiny (see annexure A for interview schedule).

3.8 ANALYSIS OF THE DATA

Data analysis is the systematic organisation and synthesis of the research data and the testing of research hypothesis using those data (Polit & Hungler 1991:643). It also entails categorising, ordering, manipulating and summarising the data and describing them in meaningful terms (Brink 1996:178). The completed interview schedules were given to a statistician at Unisa who used the SPSS computer program to analyse the data. As most of the questions included in the interview schedule were closed questions the largest portion of the interview schedule was coded for easy analysis by computer. The open questions were categorised by hand by the researcher. The findings were discussed in chapter 4 and in the case of open questions a quotation which represented the opinion of the respondents was provided. The data were mostly presented in the form of frequency tables and bar graphs in chapter 4. Reliability and validity of the research are discussed below.

3.9 RELIABILITY AND VALIDITY OF THE RESEARCH

Polit and Hungler (1999:246) states that *reliability* refers to the stability, consistency or dependability of an instrument. An instrument, which is reliable, measures accurately and reflects the time score of the attributes under investigation. Reliability of the research was ensured by making use of one research instrument, namely the interview schedule for all the respondents.

The reliability of the instrument was ensured by clearly wording the questions included in the interview schedule. A pre-test was done to determine whether the respondents understood the questions correctly and where the questions did not seem clear enough, the necessary adjustments were made before the schedule was finalised. To ensure that the respondents understood the questions correctly,

the researcher translated the questions into the language best understood by the respondents. TB registers of the institutions concerned and patients' green cards were checked to ensure that they are under supervision.

Validity refers to the degree to which an instrument measures what it is supposed to measure, and therefore an unreliable instrument cannot be valid (Polit & Hungler 1999:246; Polit et al 2001:308). The validity of the instrument was tested for face validity by the supervisors and they declared that the instruments appear as though it could measure the appropriate construct.

Content validity was also tested: The instrument was developed after the researcher studied the literature as well as the conceptualisation which came from a rich first hand knowledge of the researcher of the domain. The subjective but expert opinion and judgement of the researcher, other professionals in the field of TB therapy and the supervisors will have to be relied on for content validity. The researcher, experts in the field and the supervisors scrutinised the questions of the interview schedule and compared them with each dimension of the objectives of the DOTS strategy and what it entails as discussed in the literature review (chapter 2).

Ethical considerations of this research are discussed below.

3.10 ETHICAL CONSIDERATIONS OF THIS RESEARCH

Polit and Hungler (1999:701) state that ethics is a system of moral values that is concerned. Care was therefore taken to ensure that the human rights of all respondents in this research were maintained. For this reason permission was obtained from the Department of Health, Pietermaritzburg, the senior

medical superintendent of the institutions involved, that is King George V Hospital, Umlazi Chest Clinic and Kwamashu Chest Clinic (compare annexure B for letter of permission and for the letter of approval. This was done in order to get access and cooperation whilst conducting the study and to evaluate the findings of the research.

Permission was also obtained from the respondents, the TB patients who attend these health institutions and the following was explained to them:

- Purpose of the research
- Objectives of the research
- Method of the procedure which was to be followed
- Duration of the study
- Type of participation expected of the respondent
- How the results would be used and published
- Identification and qualifications of the researcher
- How confidentiality, anonymity and privacy would be safeguarded
- The reason for undertaking the research – for the researcher’s own development and for further research
- That their participation was voluntary and that they could withdraw at any stage of the study if they felt threatened
- That no harm would be done to them
- That their participation would be anonymous
- That the information collected would be kept confidential

(An example of the informed consent signed by each participant could be found in annexure B).

Confidentiality could be maintained because names were not written on the interview schedules or anywhere else in the reports. The interview schedules were numbered to facilitate the analysis.

In addition to the ethical considerations stated above, the research also ensured the protection of human rights. Human rights are claims and demands that have been justified in the eyes of an individual or by the consensus of a group of individuals (Burns & Grove 1993:340). Respecting the rights of others is necessary for the self-respect, dignity and health of an individual. The human rights that were protected in this research are:

◆ **Rights to self-determination**

The right to self-determination is based on the principles of respect for persons, which states that humans are capable of self-determination or controlling their own destiny (Burns & Grove 1993:340). In this research participants were treated as autonomous agents who had the freedom to conduct their lives as they choose without external control from the researcher.

These participants were informed about the proposed study and were allowed to voluntarily choose to participate or not to participate. The participants were free to terminate their participation in the study at any time without penalty. No treatment or nursing care was withheld from those who elected not to participate. All participants were aware that they were respondents of this study, and none were coerced to participate. No deception took place in this research, as respondents were fully informed, with explanation done in the language well understood by the participants about the purpose of the study.

◆ **Right to privacy**

A major ethical issue in most researches is the invasion of privacy. Privacy is the freedom an individual has to determine the time, extent and general circumstances under which private information will be shared with or withheld from others (Burns & Grove 1993:342).

From the South African Nursing Association's (1991:2) view, privacy means that a person can behave and think without interference, or the possibility of private behaviour or thoughts being used to embarrass or demean that person at a later stage. In this study the interviews were conducted in a side room in each of the three institutions so as to maintain privacy and confidentiality.

The participants were informed about the purpose of the study and consented to participate and voluntarily shared the information with the researcher. Participants had the right to decide whether they wanted to reveal personal information.

◆ **The right to confidentiality and anonymity**

Based on the right to privacy, the respondent had the right to anonymity and the right to assume the data collected would be kept confidential (Burns & Grove 1993:343). Anonymity exists if the respondent's identity could not be linked, even by the researcher, with his or her individual responses.

According to the South African Nursing Association (1991:2) confidentiality and anonymity means that any information that a respondent divulges would neither be made public or available to others. When the respondent agrees to take part in a research project, this right is waived since information has to be made public in the research report, however, the researcher has ensured the anonymity of the subjects.

The interview schedule was designed in such a way that this study achieves respondent anonymity. However, numbers were allocated to the interview schedules to enable the researcher to analyse the data.

There was no mention of correct names of respondents in the data analysis or discussion of results as this reflected mainly expressed group information (Babbie, Mouton, Vorster & Prozesky 2001:523).

◆ **Right to fair treatment**

The right to fair treatment is based on the ethical principle of justice. This principle states that each person should be treated fairly and that the person should receive what he or she is due or owed (Burns & Grove 1993:344).

In this research the selection of respondents and their treatment during the course of the study was fair as respondents were selected for reasons directly related to the problem being studied, namely their perception of the effectiveness of the DOTS strategy.

◆ **Right to protection from discomfort and harm**

The right to protection from discomfort is based on the ethical principle of beneficence. The research project should benefit the participating individual and society in general. This indicates that members of the society should take an active role in preventing discomfort and harm and promoting good in the world around them (Burns & Grove 1993:345).

In this research there were no anticipated negative effects for the respondents, as the study was non-experimental. However, a potential risk that the subject's right to privacy might not be protected was taken care of, as discussed above.

◆ **The right to informed consent**

A fundamental ethical principle of social research is: *never coerce anyone into participation; participation must be voluntary* (Neuman 1997:450). Consent also means participation in the research

study out of own free will, without any undue pressure or intimidation of any kind, after receiving all pertinent information relating to the research project. The respondent should have shown comprehension of this information. Respondents received verbal explanation that would provide the essential information for informed consent and each of the respondents signed a consent form (see annexure C).

◆ **Protection of human subjects**

The purpose and aim of the research was clearly explained to the target population and their permission sought to conduct the study and collect their responses. It was also clearly stated by the researcher that they had a right to refuse not to participate if they so wish. To maintain confidentiality respondents were interviewed in privacy, no names or initials were used, no coding of questionnaires which might read to identify the interviewee, and no address or residential place was asked or indicated in the questionnaire. Anonymity was maintained throughout. Any reference made to a particular place or people, was changed for protection (Babbie et al 2001:523).

3.11 SUMMARY

In this chapter the research methodology was discussed, for example the reason for choosing the quantitative approach to study the effectiveness of the DOTS strategy in the North South Central Health district was explained.

The criteria which was applied to determine the research population and the sample was outlined. The method of obtaining a sample and the number of participants who took part in the research was discussed.

The data collection was done by conducting interviews with TB patients who attended the health institutions within the North South Central Health district by the researcher.

Steps that were taken to ensure the reliability and validity of the findings were discussed as well as the steps that were taken to protect the rights of the participants.

Chapter 4 focuses on the analysis of the interview schedules and other data collected.