CHAPTER 3

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter describes the research design and methodology. The researcher adopted an exploratory, qualitative approach in this study because of the complex nature of the topic.

Data was collected from community nurses, clinic health managers and parents of children with disabilities using focus group discussions and interviews.

The qualitative data was analysed with the aid of the QRS NUD*IST computer programme. The ethical issues observed, and permission granted to undertake the study are also fully disclosed in this chapter.

The choice of the research design and data collection methods was based on the research objectives and Peplau's nursing theory.

3.2 RESEARCH DESIGN

Polit and Hungler (1999:36) describe a research design as an overall plan for obtaining answers to the questions being studied and handling some of the difficulties encountered during the research process.

An exploratory, qualitative design was selected in this study to seek answers to the following questions, based on the objectives of this study:

✓ What is the role of the community nurse in integrating children with disabilities into the community?
According to Peplau's theory, nursing is as an interpersonal process, which involves interaction between two or more individuals with a common goal (George 1995:50). The common goal in this study is to integrate children with disabilities into the community.

The community nurse will interact with the health system, other professionals, families and the community to integrate children with disabilities into the community (see figure 2.2, page 25 in chapter 2) showing the integration process of children with disabilities into the community).

The researcher considered an exploratory, qualitative approach to explore the role of the community nurse as a teacher, resource, counsellor, leader, technical expert and surrogate in the interpersonal process described in Peplau's nursing theory (George 1995:51).

3.2.1 Exploratory research

According to Polit and Hungler (1999:17-18), an exploratory study begins with a phenomenon of interest and is aimed at investigating the nature of the phenomenon, the manner in which it is manifested, and the other factors with which it is related. Exploratory research is undertaken when a new area or topic is investigated, to explore the full nature of a little understood phenomenon.

The role of the community nurse in integrating children with disabilities into the community is a topic that has not been investigated before as reflected in the literature review in chapter 2. In addition, it is evident from the literature review that previous research on the integration of children with disabilities focused on education and little on family and community issues.
In this study the researcher explored the integration process of children with disabilities into the community, by involving the community nurses, clinic health managers and parents of children with disabilities as research participants. An in-depth investigation of the topic was done by using both focus group discussions and interviews to collect data.

### 3.2.2 Qualitative research

The researcher intended to gain insight into what the respondents think of the role of the community nurse in integrating children with disabilities into the community and therefore chose qualitative research as the best design for this study (Katzenellenbogen et al. 1997:176).

Johnson and Christensen (2000:312) define qualitative research as research relying primarily on the collection of qualitative data (non-numerical data, such as words and pictures).

Burns and Grove (2001:26) concur, describing qualitative research as a systematic, interactive, subjective approach used to describe life experiences and give them meaning.

The researcher used a qualitative approach in this study, based on Burns and Grove’s (2001:26) and Johnson and Christensen’s (2000:312) definitions, and the major characteristics of qualitative research identified by Johnson and Christensen (2000:313) and Polit and Hungler (1999:239-240). These characteristics are (1) naturalistic inquiry, (2) holistic perspective, (3) qualitative data, (4) personal contact and insight, and (5) empathetic neutrality.

#### 3.2.2.1 Naturalistic inquiry

Naturalistic inquiry is based on the ability of humans to shape and create their own experiences, and the idea that the truth is a composite of realities.
The community nurses, parents of children with disabilities and clinic health managers described their experiences with regard to the integration of children with disabilities into the community, in their own words, in a real-world situation.

Data was collected in a naturalistic setting of clinics and special schools, and this facilitated communication. Rich, in-depth information was therefore collected.

The researcher observed and noted the respondents’ verbal and non-verbal communication throughout the data collection process.

3.2.2.2 Holistic perspective

The integration of children with disabilities into the community in this study is a complex social phenomenon. Data was collected from the community nurses, clinic health managers and parents to give meaning to the entire study.

The merging of the two data collection methods (focus group discussions and interviews) and collecting data from different levels of people (individual health managers and group of nurses and parents) was done to understand the integration from different perspectives. A holistic approach was essential for this study to give answers to the research questions.

3.2.2.3 Qualitative data

Data collection, using focus group discussions and in-depth interviews, was flexible and elastic and was adjusted to what was learned in the course of data collection. This was done to obtain a detailed description of the integration of children with disabilities into the community.

Direct quotations of the research participants captured their personal experiences. The researcher asked probing questions to obtain clarity during data collection. Qualitative data collected from the focus group discussions and interviews were complex and not readily convertible into standard
measurable units of objects. To organise the data, the researcher read through the responses to become closely familiar with the data. This was done to corroborate data.

The researcher used creativity to analyse the complex data by identifying codes and relating these to the objectives of the study.

### 3.2.2.4 Personal contact and insight

The researcher personally collected and analysed data. There was direct contact with the respondents during the focus group discussions and in-depth interviews. The researcher also had experience of the integration of children with disabilities into the community, as a former North West Province Human Genetics coordinator and community nurse. This characteristic facilitated the data collection and valuable information was provided.

### 3.2.2.5 Empathetic/neutrality

By sharing experiences, the qualitative approach was effective in investigating the emotional responses of the community nurses and parents during the focus group discussions. The researcher’s personal experience of and empathetic insight into the topic facilitated understanding of the discussions.

The qualitative research approach is subjective because of the active participation of the researcher. Burns and Grove (2001:28) maintain that the qualitative approach assumes that subjectivity is essential to understand human experiences. The researcher was therefore actively involved throughout the research process.

### 3.3 Research Method

Marshall and Rossman (1995:51) state that in most cases, a researcher cannot study all instances, events or persons intensely and in-depth. Choosing a research setting and population was fundamental to the design of the study and served as a guide for the researcher.
The research method is discussed in this section under the following headings:

- the geographical area (where the research was conducted)
- sampling.

### 3.3.1 Geographical area

The research was conducted in the semi-rural area of the Mafikeng district, North West Province. Mafikeng is approximately 25 kilometres from the Botswana border, 300 kilometres west of Johannesburg/Pretoria and approximately 450 kilometres north of Bloemfontein. The district has a population of 259 478 of whom 107 023 are children (41% of the total population in the Mafikeng district). According to the 2001 census, there are 2 322 children with disabilities in Mafikeng, which is 2% of the total population of children in the Mafikeng district (see annexure A - table: Census 2001).

### 3.3.2 Sampling

According to Burns and Grove (2001:365), sampling involves selecting a group of people, events, behaviours or elements with which to conduct a study.

This section is discussed under the following headings (Burns & Grove 2001:365-376):

- Population
- Sampling criteria
- Sampling frames
- Sampling plans.

### 3.3.2.1 Population

Population is sometimes referred to as target population and is the entire set of individuals who meet the sampling criteria (Burns & Grove 2001:366). According to Burns and Grove (2001:366), an
accessible population is a portion of the target population to which the researcher has reasonable access.

In this study three populations were used, namely, categories of community nurses working in the clinics in the Mafikeng district of the North-West Province, health managers in the Mafikeng district clinics, and parents of children not older than 18 years of age with disabilities in the Mafikeng district.

The accessible populations were the community nurses in the Mafikeng district clinics and parents of children with disabilities admitted at a special school, and the health managers of clinics who were on duty on the particular day of data collection.

The researcher was guided by the research objectives in chapter 1 to target the three populations, to give answers on the topic, from the perspective of professionals (community nurses), policy makers (clinic health managers), and non-professionals (parents).

The purpose of the study was explained to the accessible population and they were willing to describe their experiences and express their inner feelings with regard to the integration of children with disabilities into the community.

A sample was obtained from the accessible population of the community nurses, clinic health managers, and parents of children with disabilities.

3.3.2.2 Sampling criteria

According to Polit and Hungler (1999:278), the researcher should be specific about the criteria that define who is included in the population. The selection criteria for inclusion in this study were based on the three populations of the study as follows:
Sampling criteria for community nurses

The participants had to be community nurses working in the Mafikeng district clinic and be either registered nurses, psychiatry nurses, registered midwives, community nurses or enrolled nurses.

The respondents had to be able and willing to share experiences on the integration process of children with disabilities into the community and to give consent to participate in the study.

Sampling criteria for clinic health managers

The respondents had to be experienced health managers, in a clinic in the Mafikeng district, so as to be able to relate to the situation of the integration of children with disabilities, with a better understanding.

The managers had to be willing and give consent to participate in the study.

Sampling criteria for parents

The selection criteria were parents of children with disabilities who were not older than 18 years of age, residing in the Mafikeng district, who were able and willing to participate fully in the procedure for obtaining informed consent.

3.3.2.3  Sampling frame

Burns and Grove (2001:369) believe that in order for each person in the target population or accessible population to have an opportunity to be selected for the sample, each person in the population must be identified.
A sampling frame was developed by obtaining a list of clinics in the Mafikeng district from the North-West Province Department of Health. According to the list, there are twenty-two clinics in the Mafikeng district, and data was collected from eight of the clinics.

A sample frame for collecting data from the parents of children with disabilities was based on the availability of the special schools in the Mafikeng district. In the Mafikeng district, there are only three special schools. The researcher selected the first two schools to collect data from the parents.

The researcher then selected research participants from the sampling frame, using a sampling plan.

### 3.3.2.4 Sampling plan

This section is discussed under probability and non-probability sampling, and sample size.

- **Probability and non-probability sampling**

This section describes strategies to obtain samples for this study. The researcher used both probability and non-probability random sampling, because of the complex process of integrating children with disabilities into the community.

Marshall and Rossman (1995:55) maintain that the best compromise is to include a sample with the widest possible range of variation in the phenomenon, settings or people under investigation.

The probability or random sampling method was used in this study to give all the community nurses in the Mafikeng district clinics, clinic health managers and parents of children with disabilities the probability of being included in the sample.

According to Polit and Hungler (1999:284), the hallmark of probability sampling is the random selection of elements (individual units of a population) and involves a process in which each element has an equal, independent chance of being selected.
The researcher used a systematic random sampling method to gather data from the community nurses and health managers.

The sample frame of the list of clinics in the Mafikeng district was used to select every second clinic to obtain a sample of clinics to conduct the focus group discussions of the community nurses and interviews of the health managers. By this procedure, out of the twenty-two clinics on the list, eight were sampled for this study.

In the first four clinics, focus group discussions were held with the community nurses as well as in-depth interviews with the clinic health managers. In the last four clinics, only in-depth interviews with the managers were conducted. This was done to compare the responses of the health managers where focus group discussions were not held with those where focus group discussions were held.

By choosing a systematic probability sampling in this study, the researcher could not decide that the community nurses or health managers in clinic X would be better subjects for the study than community nurses or health managers in clinic Y. The probability/random sampling left the selection to chance and thus increased the credibility of the study (Burns & Grove 2001:370).

To sample parents of children with disabilities to participate in the study, probability and non-probability methods were used. A simple probability sampling was done to select the two schools from the three special schools provided in the sample frame. The three names of the schools were written on pieces of paper, and the researcher chose the first two schools.

A non-probability random purposive sampling was used to specifically sample the parents of children with disabilities. The researcher requested the principals of the two sampled schools to send request letters only to parents of children with disabilities not older than 18 years and residing in the Mafikeng district, to participate in the study. The particular characteristics of being parents of children with disabilities and residing in Mafikeng were crucial to understand the phenomenon of integration related to children with disabilities into the selected research setting of the Mafikeng district.
Sample size

Burns and Grove (2001:379) point out that qualitative studies tend to use very small samples, which may better serve the researcher who is interested in examining a situation in-depth from various perspectives.

In this study, it was not possible to decide on a specific sample size for the focus group discussions. Four focus group discussions were held with community nurses, and two with parents of children with disabilities. The groups ranged from 6 to 10 in number. All the questions in the focus group guidelines were answered and the researcher probed for clarity.

Saturation of data was reached and sampling was terminated because the researcher realised that the same answers were given to the questions by the respective groups. The questions asked to the community nurses and parents were not the same, but were based on the objectives of the study.

According to the sample frame, there are twenty-two clinics in the Mafikeng district. In-depth individual interviews were conducted with eight of the managers from the clinics, until saturation was reached.

An interview guideline was used and all the questions in the guideline were asked. The same answers to the questions asked were given, and these also related closely to the answers given by the community nurses and parents during the focus group discussions.

3.4 DATA COLLECTION PROCESS

Data collection is a process of selecting and gathering data from the research respondents (Burns & Grove 2001:460).
3.4.1 Pilot study

Burns and Grove (2001:49) describe a pilot study as a smaller version of a proposed study conducted to refine the methodology.

A pilot study was conducted in May 2003 in the Mafikeng district in the North-West Province. Draft data collection tools were used to collect data from the community nurses, health managers and parents. The aim of the pilot study was to determine the clarity of questions, effectiveness of instructions, time required to complete the interviewing process, sequencing of questions, and the procedure to record responses. The success of interviews and focus group discussions as data collection methods for this study was then determined (Burns & Grove 2001:421).

Following the pilot test, questions that were not clear to the research participants were rephrased and the sequence rearranged. The researcher established rapport with relevant authorities in the Mafikeng district and gained the skills to conduct interviews.

3.4.2 Data collection methods

In this study two data collection methods were utilised, namely focus group discussions and in-depth interviews, to collect data from the community nurses, clinic health managers and parents of children with disabilities.

3.4.2.1 Focus group discussions of community nurses and parents

Johnson and Christensen (2000:145) describe a focus group as a type of group interview in which the moderator (researcher) leads a discussion with a small group of individuals to examine in detail how the group members think and feel about a topic.
As discussed in section 3.3.2.4, four focus group discussions with the community nurses and two with parents were held to avoid relying heavily on the information provided by a single focus group (Johnson & Christensen 2000:146).

**Focus group setting**

The researcher noted that to collect in-depth valuable information during the focus group discussions, good interpersonal skills are essential as well as the knowledge to facilitate a group discussion. A checklist was therefore prepared by the researcher to use as a guideline. The checklist was also discussed with the assistant before each data collection process.

The focus group setting was based on the preparations for an ideal room to facilitate discussions.

The researcher organised a non-threatening and relaxed environment for the group discussions. At the clinics, rooms usually used by the staff for presenting lectures or holding meetings were used.

At the special schools, one of the classrooms was used. The chairs were comfortable and arranged in a circle to allow eye contact with other participants and the researcher. There was minimal noise and there were no phones in the rooms, except in one clinic. The rooms were ideal for quality tape-recording of the sessions, where an audiotape was used.

**Focus group proceedings**

The researcher welcomed the group and thanked them for granting permission to do the focus group discussions. This was followed by self-introduction of the researcher and the assistant. Members in the group were asked to introduce themselves.

The researcher clarified the aim of the focus group discussions. The researcher explained that the role of the assistant was to observe the group proceedings, assist with taking field notes during the group discussions, and provide information to the researcher when needed. The respondents were
comfortable with this arrangement. The assistant was also requested to assist in observing the non-verbal expressions of the participants.

As a retired community nurse, the assistant was very helpful. Being conversant with nursing terminology and a former colleague of the community nurses who participated in the group discussions made the participants relaxed and facilitated the discussions.

Permission was requested from the respondents to use an audiotape for recording the proceedings. Out of the four group discussions of the community nurses, only one group felt uncomfortable with the use of a tape. The group indicated that they were confident that the assistant would take notes efficiently, and offered to be contacted for clarity after the data collection process.

The researcher disclosed all the information needed for the study for the participants to understand and make them aware that they had a free choice in giving consent. The community nurses and clinic health managers who participated in the study all signed consent forms. The parents gave verbal consent, and it was explained to them that consent forms were available for signing.

Ground rules for focus group discussions were discussed and set by the participants and researcher. These included respect for each other, allowing one person a chance to talk, talking loudly for note taking, audio tape-recording, and for other people to hear, repeating a question if it was not understood, clarifying a point if other participants did not understand it, and acknowledging that people's viewpoints and experiences differ, but were all important to share.

The researcher and the respondents agreed on the duration of the group discussions. The researcher used the focus group topic guide to facilitate the discussions (see annexure C).

The researcher covered all the questions in the focus group topic guide. Integration and inclusion are terms not commonly used by the community nurses and parents. Therefore the researcher started with a more general question on this aspect in order to clarify the meaning of integration or inclusion as
terms for this particular study to the respondents. The more specific questions were asked later during the data collection process.

The researcher considered the interests of the participants before continuing with the topic for the study. For instance, parents of children with disabilities were asked to discuss the progress of children in the special school and positively acknowledged the support from the teachers of the special school.

The principals of the respective special schools where the focus group discussions were held were present during the data collection process, also to understand the parents' views on integration issues. The presence of the principals made the parents feel at ease, and initiated important discussion.

The respondents were given an opportunity to express their views, and were encouraged to talk to one another rather than address all comments to the researcher. This worked very well and encouraged discussion, especially for the parents. It encouraged parents to share their experiences and discuss approaches to handle particular parental problems.

The researcher exercised observational skills during the data collection proceedings. During one of the parents' focus group discussions, the researcher observed that one of the elderly mothers presented with non-verbal facial expressions of illness and restlessness. On enquiry, the mother admitted to feeling dizzy, but was hoping that it would pass. The chair of the mother was then rearranged so that she could be closely observed by the researcher and the assistant and she was advised to report if the condition was getting worse. A younger mother sitting next to the elderly mother was requested to keep an eye on the older woman.

To decide on the saturation of a topic, the researcher observed that no new information was given and would thank the participants and suggest moving on to the next question.

The researcher remained neutral and avoided extreme dominance or passiveness. For example, realising that the male respondents were not participating during one of the community nurses' focus group discussions, the researcher invited male response by saying, “We would appreciate a male
voice now.” The response was positive, and the male respondents shared valuable information with the group.

The participants were thanked at the end of the focus group sessions and debriefing was held to give participants a chance to ask questions.

The availability of results of the study was discussed and it was agreed that a copy of the dissertation would be made available to the North West Department of Health Research Unit after completion of the study.

The group discussions were held for one to two hours. The researcher strived to keep the agreed upon duration of the discussions to avoid the respondents becoming restless and maintain their trust.

The researcher organized refreshments after the focus group sessions of parents only, because after the group discussions with community nurses, routine clinic work had to start immediately.

**Reasons for choosing focus group discussions**

- Johnson and Christensen (2000:145) explain that the group is called a “focus” group because the moderator keeps the individuals in the group “focused” on the topic being discussed. The focus of this study was on the role of the community nurse in integrating children with disabilities into the community, and the questions during the focus group discussions were based on this premise.
- Respective, fairly homogenous groups of community nurses working in the Mafikeng district clinics and parents of children with disabilities residing in Mafikeng district assembled for the group discussions, to solicit their opinions and experiences simultaneously on the topic. This was done to promote a comfortable group dynamic and helped the parents and community nurses to share their thoughts with each other (Burns & Grove 2001:424).
- Data collection could be and was done within a week. It was useful to collect in-depth information and viewpoints of many individuals in a relatively short period.
The numbers of the group participants ranged between 6 and 10. This was cost-effective for the researcher in terms of time and funds, because there was no need to travel to all twenty-two clinics to collect data.

Different forms of communication were used during the focus group discussions, including teasing, arguing, joking and nonverbal approaches, such as gesturing, facial expression and other body language. For instance, during one of the group discussions, one of the community nurses explained that myths and superstitions are barriers to integrating children with disabilities into the community. There was some consensus in the group on this aspect, with some participants nodding their heads, indicating that they fully agreed with the input.

Focus group discussion is a socially oriented research procedure. The participants were therefore studied in a natural, real-life atmosphere in the clinics and at the special schools. The respondents were at ease relating their experiences in a familiar setting. In addition, qualitative data was collected in the words of the respondents, capturing the emotional aspect of the topic.

The parents and the community nurses were important resources of information, and the researcher helped them to recover forgotten information through focusing the interview. For example, the researcher facilitated discussion by saying, “Hmm… what about health education? Do you think it would be helpful to integrate children with disabilities into the community?”.

The community nurses and parents of children with disabilities expressed their views honestly, especially on barriers to the integration of children with disabilities. One of the community nurses honestly admitted that the nurses are sometimes barriers.

Group support for expressing feelings, opinions, or experiences was enhanced during the focus group discussions. For example, during one of the community nurses’ focus group discussions, one of the nurses supported another’s opinion “… to add to what Nkele has said Neh! … attitude is important, because last year one child was involved …”.

The researcher used disagreement among the participants to encourage the participants to state their point of view clearly, and provide the rationale for their position. For example, one of the community nurses felt very strongly that children with albinism are integrated into the community, stating “But I think those children with albinism here in our area are accepted, unlike those with Down syndrome, at least they attend schools, besides the myths that they don’t die they disappear and are sometimes called whites.”
Semi-structured questions were used to collect data and the researcher acted as a facilitator. The researcher probed for more information. For example, in one of the clinics during the focus group discussion, the community nurses indicated that they saw approximately four cases of children with disabilities per year, and the researcher asked, “Do you think the ones coming to the clinic are the only ones in the area?”

The focus group topic guide questions used to collect data from the community nurses and parents of children with disabilities are included as annexure C.

**Limitations of the focus group discussions**

When conducting the focus group sessions, the researcher was on the alert for the following limitations:

- The researcher tried to avoid the potential problem of having less control over a group interview, which could result in lost time and dead-end or irrelevant issues being discussed. The researcher therefore tried to allow for deeper discussions of issues, but remained in control to focus on the topic.
- The researcher noted that effective interviewing, communication and observation skills were crucial throughout the group discussions.
- The researcher tried to identify parents of children with disabilities and community nurses who appeared uncomfortable at expressing their views in front of a group of people. In this regard, the researcher encouraged discussion by following a response of one of the respondents by saying “Mrs X, what do you think you can add to what Mr X said?”
- Qualitative data collected from the focus group discussions was complex and time consuming to analyse manually, therefore the QRS NUD*IST computer programme was also used for coding and sub-coding. The researcher had to use creativity in organising and giving meaning to the data.
3.4.2.2 Interviews with clinic health managers

According to Burns and Grove (2001:420), interviews involve verbal communication between the researcher and the subject during which information is provided to the researcher. Structured interviews were used to collect data from the Mafikeng clinic health managers.

The questions for the interviews were designed by the researcher to focus on the topic and the researcher exercised control over the content of the interview. An interview protocol (see annexure C) was developed by the researcher and used during the interviews.

The interviews lasted between thirty minutes and one hour, and the researcher tried to maintain a cordial and open atmosphere. Clarification questions were used on issues that were unclear. Emotions and the hopes raised during the interviews were respected.

At the end of each interview, the respondents were thanked, a debriefing session was allowed to give the respondents a chance to ask questions.

The respondents were reassured of the confidentiality of the information and were told that after completion of the study, the findings of the study would be available in the North West Province Department of Health Research Unit.

Reasons for choosing interviews with clinic health managers

The researcher chose interviews with clinic health managers in this study because they have the following advantages (Burns & Grove 2001:422):

- Interviews are a form of self-report, and the researcher assumes that the information provided by the health managers is accurate.
- A follow-up appointment for the interview was made a day before data collection in the respective clinics, and the health managers were given the interview protocol to gain an insight into the type
of questions that would be asked. This allowed the respondents sufficient time to think of the answers to the questions.

- The interviews were conducted in the health managers' offices, which were quiet, to allow privacy for interaction and provide a pleasant environment, which facilitated obtaining valid and reliable information.
- The response rate was high, because data could be collected from the eight out of the twenty-two clinics in the Mafikeng district.
- The interview was useful to acquire large amounts of data quickly, and the researcher was able to check descriptions against facts, especially in the clinics where focus group discussions were held first with the community nurses (Marshall & Rossman 1995:82-83).

**Limitations of interviews**

The researcher acknowledge that interviews have the following limitations:

- Katzenellenbogen et al (1997:177) hold that a major disadvantage of interviews is that, compared to other qualitative methods, the respondent is more removed from his or her own context and may feel threatened, resulting in bias of data collected. In this study the respondents were former colleagues of the researcher, and the atmosphere was a relaxed one, to facilitate honest discussions with retrospection on the situation of children with disabilities in Mafikeng.
- Interviews involve personal interaction and therefore co-operation of the health managers was essential (Marshall & Rossman 1995:81). The researcher tried to get the cooperation of health managers by making the interview protocol available beforehand and agreeing on the best time to conduct the interview.

### 3.5 DATA ANALYSIS

The researcher undertook data analysis to reduce, organize and give meaning to the complex qualitative data collected from the focus group discussions and interviews.
Data was transcribed and prepared in an accessible visual written presentation using the MS Word computer programme and the QRS NUD*IST computer programme to code and categorise data. This section discusses the (1) transcribing process, (2) steps followed by the researcher to develop an organizing system for qualitative data (Tesch 1990:142-143), and (3) reasons for using a computer programme for data analysis.

3.5.1 Transcribing interviews and notes

Transcribing involved preparing data in an accessible written format. Transcription was done by the researcher a week after collecting data. The researcher started with the MS Word computer programme to present data in a typed format. Tape-recorded interviews were transcribed word for word. The notes taken by the assistant during the group discussions were modified accordingly by the proceedings expressed in the tape.

3.5.2 Developing and organising system for data

The researcher used Tesch’s (1990:142) guidelines organising data as follows:

- Data was prepared in text units, by listening to the tape to get the feeling and emphasis and writing the verbal and nonverbal proceedings.
- The researcher read and reread the transcripts to acquire a sense of the whole. Background information was noted by recalling observations and experiences, so as to be immersed in the data.
- The researcher noted core facts to identify a topic, and wrote these down in the margin of the document.
- The researcher worked on the topics by:
  - making a list of topics as identified in the data set of nurses, managers and parents
  - comparing and clustering the topics together
  - sorting the topics according to the research objectives
- Each topic was given a code using the QRS NUD*IST computer programme.
Coding involved searching the data for common themes.
The organizing system was refined and the topics defined.
Recoding was done to reflect on data
(See annexure B: QRS NUD*IST coding system).

3.5.3 Reasons for using a computer for data analysis

The QRS NUD*IST programme was used for coding. The researcher was motivated by the advantages identified by Burns and Grove (2001:592) on the use of a computer for analysing qualitative data. These advantages include:

- It was easy to code and recode from the three data sets of focus group discussions of community nurses and parents of children with disabilities, and interviews with clinic health managers.
- The researcher had to think carefully and logically, concentrate and remember the codes already used. A quiet place with minimal disturbance was therefore used to gain meaningful insight into all data provided.
- Computer printouts of data were available, and this enhances confirmation of data.
- The computer was helpful because the researcher could easily process, store and retrieve the necessary information as the need arose.
- A backup database was made by storing files on a floppy disk to keep safe in case of emergency, for example losing written documents.

3.6 TRUSTWORTHINESS OF THE STUDY

Trustworthiness is a term used in the evaluation of qualitative data. Polit and Hungler (1999:426) affirm that qualitative researchers are as eager as quantitative researchers to have their findings reflect the true state of human experiences.
In this study the researcher established the trustworthiness of data and the findings by using Lincoln and Guba’s (1985) criteria (in Polit & Hungler 1999:427) of (1) credibility, (2) transferability, (3) dependability, and (4) verifiability (confirmation).

3.6.1 Credibility

According to Polit and Hungler (1999:427), credibility refers to confidence in the truth of the data.

Marshall and Rossman (1995:143) cite Lincoln and Guba (1985) that the goal of credibility is to demonstrate that the inquiry was conducted in such a manner as to ensure that the subject was accurately identified and described. Credibility in this study was established through (1) triangulation, (2) researcher credibility, and (3) the use of an audiotape-recorder.

3.6.1.1 Triangulation

Johnson and Christensen (2000:208) define triangulation as cross-checking information and conclusions through the use of multiple procedures or sources. Marshall and Rossman (1995:144) describe triangulation as the act of bringing more than one source of data to bear on a single point. Person and method triangulation was noted as follows in this study:

- **Person triangulation** was used by collecting data from the individual health managers, group of community nurses and group of parents of children with disabilities. This was done to give credibility to the data collected from various levels of people (individual level to groups) on the integration of children with disabilities into the community (Polit & Hungler 1999:428).

- **Method triangulation** enhanced the credibility of this study. Focus group discussions were used to collect data from the community nurses and parents of children with disabilities, and interviews to collect data from clinic health managers. Conducting focus group discussions and interviews was done in this study to have good evidence of the findings because the weakness and strength of the two data collecting methods are different (Johnson & Christensen 2000:213).
Data collected from the community nurses, clinic health managers and parents using focus group discussions and interviews was in agreement and corroboration (confirm or give support) was therefore achieved (Johnson & Christensen 2000:208).

Polit and Hungler (1999:429) indicate that by using multiple methods and perspectives, researchers attempt to sort out “true” information from “error” information.

### 3.6.1.2 Researcher credibility

Researcher credibility enhanced confidence in the data of the study (Polit & Hungler 1999:429). The researcher is an experienced facilitator of workshops in the provinces for parents of children with birth defects and disabilities, and health care workers. The effective communication skills the researcher gained during these workshops, with both the non-professionals (parents) and the professionals (nurses), added credibility to the study.

As a community nurse trained in Human Genetics, the researcher was previously responsible for providing genetic counselling to persons with genetic disorders and their families. The researcher therefore had good interviewing skills.

In addition, the researcher attended an Applied Management Technique Course on Effective Communication in 2000. This course equipped the researcher for effective listening and providing a climate that encourages participation.

The researcher is well known to the community nurses and the health managers in the Mafikeng district clinics, as a former colleague in the North West Province and a former Provincial Human Genetics Coordinator for eight years. This relationship facilitated communication throughout the study and quality information was shared.

Moreover, during her time as a Provincial Co-ordinator, the researcher conducted genetics outreach clinics at the special schools as well and was therefore known to the principal and the teachers.
This facilitated communication with the parents during the focus group discussions. During the introduction, the parents felt relaxed that the researcher and the assistant were residents of the Mafikeng district, understood their problems, and talked the same language.

Both the researcher and assistant are Tswana-speaking and understood the local language in the Mafikeng district. An interpreter was therefore not used during the focus group discussions with parents of children with disabilities. The translated questions in the focus group topic guide were asked to the parents with understanding, and the responses were well understood by both the researcher and assistant.

3.6.1.3 Use of an audiotape

Confidence in the data was also established through the use of an audiotape. Permission to use an audiotape to collect data during the focus group discussions was sought from and granted by the research participants.

Detailed information was also recorded in writing by the assistant. Each day after the focus group discussions, the researcher and the assistant listened to the tapes, to familiarise themselves with the proceedings and decide where to improve in the subsequent focus group discussions. A week after data collection, the researcher transcribed the data, using the notes and listening to the tapes.

3.6.2 Transferability

Transferability is also referred to as generalisability. Transferability is described as the extent to which the findings from the data can be transferred to other settings or groups (Polit & Hungler 1999:430 cite Lincoln & Guba 1985).

According to Marshall and Rossman (1995:144), transferability of a qualitative study to other settings may be problematic. To counter this challenge, in this study detailed information is provided on the data collection process and analysis to guide the reader to determine whether the findings can be
transferred to other settings. Furthermore, Marshall and Rossman (1995:144) assert that using more than one data gathering method can greatly strengthen the study's usefulness for other settings.

Method triangulation was applied in this study, by collecting data using both the focus group discussions and in-depth interviews. The researcher provided essential information on the research design and method used to undertake the study in the Mafikeng district. This will enable others to reach a conclusion about whether a transfer can be contemplated as a possibility. It is transferable in the same circumstances, setting and similar sample.

### 3.6.3 Dependability

Polit and Hungler (1999:430) describe dependability as stability of data over time and over conditions.

Marshall and Rossman (1995:147), however, maintain that the assumption of an unchanging social world is in direct contrast to the qualitative assumption that the social world is always being constructed, and the concept of replication is problematic.

However, dependability of this study is based on the fact that both the personal and method triangulation were used during the data collection process (see section 3.6.1.1 on page 66).

### 3.6.4 Verifiability or confirmation

The researcher had to decide on how the findings of the study could be confirmed or verified by others. Verifiability is the objectivity or neutrality of the data, such that there would be agreement between two or more independent people about the relevance or meaning of the study (Polit & Hungler 1999:430).

Confirmation focused on the characteristics of the data collected. The researcher established an audit trail. Material and documentation that allow an independent auditor to come to conclusions about the data was available. These are raw data of the focus group discussions and interview transcripts, and
analysis products, print-outs from the computer and drafts of the final reports (Polit & Hungler 1999:430).

As a former community nurse in the Mafikeng district and a former North West Provincial Genetics Coordinator, the researcher had insight into the situation of children with disabilities, and the community health set-up of the area under study. This enhanced the criterion of verifiability because of the researcher’s understanding and empathy for the research participants.

The researcher noted the possibility of bias in interpretation of data, and therefore

- engaged a person to critically question the data analysed
- followed the guidance of previous researchers to control data quality (Marshall & Rossman 1995:145).

### 3.7 ETHICAL CONSIDERATION

Johnson and Christensen (2000:63) describe research ethics as a guiding set of principles to assist the researcher in establishing goals and reconciling conflicting values.

Section 9.2 of the Guidelines on Ethics for Medical Research, the Medical Research Council [sa] emphasises that the research participants, whether healthy or sick, must be made fully aware of their position and the nature of the research, as entrenched in the South African Constitution.

The research proposal of this study was found to be ethically suitable by the Department of Health Studies Research and Ethics Committee, University of South Africa, after careful review of the researcher’s proposed research and data collection tools (see annexure D).

In this section the researcher used the Guidelines on Ethics for Medical Research and the ethical rights of the participants (Burns & Grove 2001:196) as follows: (1) role and competence of the
researcher, (2) right to self-determination, (3) right to privacy, (4) right to anonymity and confidentiality, (5) right to fair treatment, and (6) protection from discomfort and harm.

3.7.1 Role and competence of the researcher

According to Section 9.4 of the Guidelines on Ethics for Medical Research, the character of the researcher is critical for the quality of the scientific knowledge and the soundness of ethical decisions in any research project.

In this study the researcher tried to observe ethical issues throughout the research process. The researcher noted that lack of the research participants to co-operate could lead to non-response and unreliable results. Before the focus group discussions, the researcher discussed the importance of observing the ethical rights of the research participants, and the contents of the consent forms with the research assistant.

The researcher conducted a preliminary literature review to define and be conversant with the risks inherent in participation of the study.

The integrity of the researcher to yield important knowledge to the study is discussed in detail in section 3.6.1.2 (page 67) on researcher credibility.

3.7.2 Right to self-determination

The right to self-determination is based on the ethical principle of respect for persons (Burns & Grove 2001:196). Respect and courteous treatment of the research participants was maintained throughout the study. The community nurses and the clinic health managers were informed of the proposed study a week before data was collected.
Request letters from the Mafikeng District Health Department were sent to all the Mafikeng district clinics, informing the staff of the intention of the researcher to conduct the research from 9 to 13 June 2003 in the clinics.

A day before data collection in the sampled clinics, the researcher visited the clinics to personally request permission to collect data, and to distribute the focus group topic guide and interview protocols as well as the consent forms.

The consent forms entail purpose of the study, description of the procedure, potential risk and benefit, right to confidentiality, right to withdrawal from the study at any time without a penalty, and names and contact details of the researcher and UNISA research supervisors (see annexure E).

In the planning stage, the researcher made arrangements so as to avoid interference with the routine clinic procedures, by requesting the in-charge of the clinic to determine the best possible time to do the focus group discussions and interviews. The focus group discussions were therefore conducted in the mornings between 07:00 and 08:00. In all the clinics, arrangements were made to attend to clinic clients who arrived between 07:00 and 08:00.

The community nurses admitted that community members report to the provincial health offices in the case of failure to be attended to promptly and efficiently by the clinic staff. The researcher respected this, and explained to the community nurses that the group discussions were planned to finish within an hour. The duration of the group discussions was agreed upon by the researcher and the respondents.

The community nurses and health managers who participated in the research all signed consent forms, after the entire study procedure was explained.

The researcher was aware that taking notes and the use of an audiotape might be intimidating to the research participants. The researcher therefore requested permission to use the tape, and explained that the assistant would be taking notes.
The researcher made sure that there was an agreement in this regard. The researcher went to the extent of asking the participants individually whether they agreed to the tape being used, and the verbal and non-verbal communication was observed.

In one of the group discussions with the community nurses, the research participants were not comfortable with the use of a tape and this was respected. This particular group indicated that they had confidence that the assistant would record the proceedings and responses efficiently, and the in-charge of the clinic also indicated that the clinic could be contacted for clarity during the transcribing process.

The principals of the special schools sent letters to the parents requesting them to participate in the focus group discussions. The principals suggested the best days to meet with the parents to the researcher. In one of the schools, the focus group discussion was held on a Sunday afternoon from 15:00 to 16:30, and another was held on a Wednesday morning from 10:00 to 12:00.

The purpose of the study, description of the procedure, potential risk and benefit, right to confidentiality, and right to withdrawal from the study at any time without a penalty were explained verbally to the parents. The researcher speaks the same language as the parents, namely Tswana, and explanation on the entire research proceedings was done with understanding. The parents gave consent to participate in the study.

3.7.3 Right to privacy

Privacy is the right of an individual to determine the time, extent, and general circumstances under which personal information will be shared with or withheld from others (Burns & Grove 2001:200). Bless and Higson-Smith (1995:102) maintain that right to privacy demands that direct consent for participation be obtained from the adults.
The right to privacy in this study was based in the right to self-determination as described in section 3.8.1 below. The research procedures were explained to the participants in detail. The participants consented to participate in the study and voluntarily shared information with the researcher.

3.7.4 Right to anonymity and confidentiality

Burns and Grove (2001:201) explain that on the basis of the right to privacy, the research participant has the right to anonymity and the right to assume that the data collected will be kept confidential. Confidentiality is the researcher's management of private information shared by the participant that must not be shared with others without the authorisation of the research participant.

However, Bless and Higson-Smith (1995:103) maintain that in many studies anonymity cannot be maintained, especially when data is collected using interviews. In this study, the researcher had direct contact with the research participants during the focus group discussions and interviews. The respondents were assured that data collected would be treated with confidentiality, used for the research purpose only, and that no one would have access to the interview data or the audiotapes. This facilitated the respondents' confidence to discuss the topic openly and honestly (Bless & Higson-Smith 1995:103).

To safeguard the confidentiality and anonymity of the respondents, the researcher did not obtain identifying information, such as names and addresses, during the data collection process (Polit & Hungler 1999:139).

The confidentiality and anonymity of the community nurses, parents of children with disabilities and clinic health authorities selected was guaranteed. The researcher will maintain their anonymity and not link any information to any person, nor will the researcher publicise the information in a manner that identifies the participant.
3.7.5 Right to fair treatment

The right to fair treatment is based on the ethical principle of justice. The researcher strived for fairness in the selection of subjects and their treatment (Burns & Grove 2001:202).

With regard to the selection of subjects, the researcher observed the right to fair treatment by targeting three populations for the study, namely categories of community nurses working in the clinics in the Mafikeng district of the North West Province, health managers in the Mafikeng district clinics, and parents of children not older than 18 years of age with disabilities. Both probability and non-probability sampling methods were used to sample the accessible population (see section 3.3.2.4, pages 52).

The purpose of the study was explained to the target population, and they were willing to describe their experiences and express their inner feelings on the integration of children with disabilities into the community.

To address the issue of fair treatment to the research participants, appointments were made with the subjects to collect data and honoured. The data collection process was terminated at the agreed time. It was explained to the research participants that the findings of the study would be made available at the North West Province Department of Health Research Unit on completion of the study.

3.7.6 Right to protection from discomfort and harm

The right to protection from discomfort and harm is based on the ethical principle of beneficence, which holds that one should do good and, above all, do no harm. Discomfort and harm can be physiological, emotional, social and economic in nature (Burns & Grove 2001:203).

In this study, the levels of discomfort and harm are based on temporary discomfort, which the research participant may experience in daily life, and ceased with the termination of data collection. This study was considered a minimal-risk study. The emotional and social risks for the participants of being anxious in participating in the group discussions and sharing knowledge and experiences with other participants were observed, and the researcher was on the alert for this (Burns & Grove 2001:204).
To observe the right to protection from discomfort and harm, the researcher:

- carefully considered the phrasing of the questions and did a pilot study to test the data collection tool, and the words used in the questions.
- held a debriefing session at the end of each data collection period, to allow the participants to ask questions after participating in the study.
- gave a copy of a consent form with the contact details of the researcher to the in-charge of the clinics where data was collected, and it was explained to the research participants that they could contact the researcher.
- assured the research participants that the information they provided would not be used against them in any way (Polit & Hungler 1999:134).

### 3.8 PERMISSION TO CONDUCT RESEARCH

A letter requesting permission to conduct a study in the Mafikeng district was sent to the North West Province Health Research Committee (see annexure F). The research proposal, draft questionnaires and the ethical clearance letter from UNISA, Department of Health Studies, Ethical Clearance Committee were attached to the request letter.

Written permission was obtained from the North West Province Health Research Committee to conduct the research in the North West Province (see annexure G).

Another letter was written to the Mafikeng District Health Department to request permission to conduct research specifically in the Mafikeng district (see annexure F).

The Mafikeng District Health Department sent request letters a week before the data collection to all the Mafikeng district clinics informing the staff of the researcher's intention to conduct the research from the 9th to 13th June 2003 (see annexure G).
The researcher visited the special schools three weeks before the planned data collection to request permission to collect data and explain the aim of the study. A copy of a letter from the North-West Department of Health Research Committee giving the researcher permission to undertake the study, and a letter from UNISA, Department of Health Studies, Ethical Clearance Committee were given to the principals of the special schools.

The questions were given to the special school principals a week before the scheduled data collection time. Both the English and Tswana translated questions were given to the principals, and they were requested to review the terminology used to see whether it was in line with the parents' preferred language. The principals sent letters to the parents requesting them to participate in the focus group discussion and explaining the purpose of the study.

3.9 CONCLUSION

This chapter described the research design and methods to collect data in the Mafikeng district. An exploratory, qualitative design was useful in this study to gain in-depth insight into the role of the community nurse in integrating children with disabilities into the community.

Chapter 4 discusses the data analysis and the research findings in detail.