

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the procedure used to obtain data. It also describes the study design, the population, the sampling techniques, the research instruments used as well as the ethical considerations that are involved in this research study.

3.2 RESEARCH METHODOLOGY

The approach that is used in this research is quantitative.

According to Burns & Grove (1997:27), quantitative research is a “formal, objective, systematic process in which numerical data are utilized to obtain information about the world.”

In this research, the extent of the problem i.e. the needs of the mentally retarded and the availability of facilities and services in the community of District 22 (sub-district 222), KwaZulu-Natal was measured. As no research was done on the needs of the mentally retarded patients and the availability of services and facilities for their care in the community, it is imperative that this research be done **now** so as to measure the extent of the problem.

3.2.1 Research design

Research designs spell out the basic strategies that the researcher uses to develop information that is accurate and interpretable (Polit & Hungler 1997:153).

The design for this research was quantitative, exploratory, descriptive and contextual.

- **Quantitative** has already been discussed.

- **Explorative research**

This research begins with some phenomenon of interest, aimed at exploring the dimensions of phenomenon, the manner in which it is manifested, and the other factors with which it is related (Polit & Hungler 1997:457). This research explored the needs of the mentally retarded patients and the availability of services and facilities in the community of District 22 (sub-district 222), KwaZulu-Natal.

- **Descriptive research**

All descriptive research has one thing in common, in that “they must provide descriptions of the variables in order to answer the question” (Brink & Wood 1994:106). According to Polit and Hungler (1997:168), descriptive research is to observe, describe and document aspects of a situation. In this research, a detailed picture of the needs of the mentally retarded patients was described.

- **Contextual design**

According to Collin (1995:11) context means “background, connection, frame of reference, framework, relation.” This research is contextual in nature as it is executed within the context of the mentally retarded patients living in the community of District 22 (sub-district 222), KwaZulu-Natal.

3.2.2 Research population

The research population, which can also be referred to as the target population, is the entire set of individuals or elements who meet the sampling criteria (Burns & Grove 1997:293).

In this research the research population were made up of the mentally retarded patients in the community of District 22 (sub-district 222), KwaZulu-Natal. The total number of the mentally retarded in the community of District 22 (sub-district 222), KwaZulu-Natal, is not known.

3.2.3 Sampling approach

The sampling approach to be used is non-probability sampling method.

- Not every element/retarded patient has an opportunity for being included in the sample.
- Despite the fact that non-probability sampling is less likely than probability sampling to produce accurate and representative samples, most research samples in most disciplines including nursing are non-probability samples.

- In this research, the researcher used her own judgment in selecting the participants of the target population i.e. the mentally retarded patients living in the community of District 22 (sub-district 222), KwaZulu-Natal.

3.2.3.1 The Sample

- A purposive sampling method was used to select the participants for the research.
- It is sometimes referred to as judgmental sampling.
- This method involves the researchers conscious selection of certain subjects or elements to be included in the study.
- The reason for choosing purposive sampling method is the fact that there are different levels of retardation, and the researcher had to use her own knowledge, experience and judgment to determine who would be included in the sample to generate data required for the research.

3.2.3.2 Sample Size

The patients who were included in the sample were those who fall under the classification of mental retardation.

The research population are all the mentally retarded patients in the community of District 22 (sub-district 222), KwaZulu-Natal, who are classified with mental retardation (see definition page 16-17).

A total of 167 respondents were used in this study. The sample used for the research were all the mentally retarded patients who were present at the pay points and relatives or

guardians who claimed to have a mentally retarded child or relative at home (fit the criteria for mental retardation).

3.3 DATA COLLECTION APPROACH

- Data collection in a quantitative study normally proceeds according to a pre-established plan, such as where and when the data was gathered, describing the study to the subjects, obtaining the necessary informed consent and if necessary for training those who were involved in the collection of the data (Polit & Hungler 1997:45).
- Data collection was done by means of an interview schedule (questionnaire) with mostly closed questions and only a few open ended questions.
- Interview schedules were chosen as they are less expensive particularly in terms of time spent collecting the data.
- Interview schedules are more expensive if the researcher made use of other researchers and had to pay for their services.
- Further clarification of a question could be provided if the individual misinterpreted the questionnaire (Brink & Wood 1994:154 -157).

3.3.1 Data collection method

The researcher collected data from the respondents as follows:

- The researcher obtained a payout time table from the Paymaster of the Social Department of District 22 (sub-district 222), KwaZulu-Natal. The time table displayed information on the dates and the pay points, namely:

Boston, Impendle, Mpomphomeni, Trust Feed, Mpolweni Mission, Nottingham Road, Cedara, Lions River, Howick, Underberg, Bushmansnek and Simons Store, where the social grants were paid out for the month.

- The researcher first approached the Pay Master Committee Members and the elected Counselors at each of the pay points, informing them of the researcher and assistant's presence and the reasons for conducting the research.
- The researcher met with each respondent at the different pay points of District 22 (sub-district222), KwaZulu-Natal, where the patient/parent/guardian collected his/her grant, for the interview, and the completion of the interview schedule.
- The interview schedule was completed by the researcher and two assistants. The assistants role is explained in Chapter 3.
- During the interview, the researcher explained in more detail the purpose of the research and its significance so as to increase the respondents understanding of the meaning of the questions and also to encourage them to answer all questions carefully and as completely as possible.

3.4 RESEARCH INSTRUMENT

3.4.1 Format of the interview schedule

A total of 199 questions were included in the interview schedule. Questions were constructed of both open and closed-ended questions. The close-ended questions had alternatives from which the respondents could choose an answer. In certain instances,

some questions had to be further discussed with the respondents in order to ensure that they understood the meaning of the specific questions.

Valuable information was obtained in this manner, which could not have been achieved if a questionnaire was used, and had to be distributed to be completed by the respondents on their own. The interview schedule was sub divided into different sections concerned with the following aspects:

- Section A of the interview schedule was concerned with general information of the respondents.
- Section B dealt with the assessment of needs of the mentally retarded , such as physical, psychological, social, emotional spiritual, financial, educational and cultural.
- Section C was concerned with the support systems that the respondents used, to cope with life's problems.
- Section D attempted to identify the community resources that the respondents utilized to use their remaining capabilities and to remain in the community.
- Section E attempted to prioritize those needs as stated by the respondents themselves.

In designing the interview schedule, the researcher tried to ensure that it was free from bias by using the same interview schedule with each respondent. The interview schedule was also constructed in such a way, so as to facilitate for easy administration thereof, as well as to satisfy computer-coding requirements in preparation for later computerization of the responses. Each question was given a code for subsequent computerization. The

purpose of coding is to facilitate the retrieval of data segments by coding category. Used in this manner, coding simplifies and reduces the data.

3.4.2 Validity and reliability

To be useful, all measures and scales must be valid and reliable. Both validity and reliability judge how good the various components and processes of research are. Seaman (1987:317) as confirmed by Brink and Wood (1994:170) state that reliability and validity, in research, refer specifically to the measurement of data, as they will be used to answer the research questions. It also states that in most cases, the instrument that measures the variables in the research is the central issue in determining the reliability and validity of data. Polit and Hungler (1997:467) state that an ideal instrument is one “that results in measures that are relevant, accurate, unbiased, sensitive, undimensional and efficient”. After the instrument was developed, it was tested for its validity and reliability, before the actual data collection was done.

3.4.2.1 Validity

Brink (1996:124) as well as Burns and Grove (2001:226) agree that validity refers to the extent to which various research elements measure what each purports to measure. Therefore, validity testing actually validates the use of an instrument for a specific group or purpose (Burns & Grove 1999:260). Validity is the assurance that an instrument measures the variables it is supposed to measure. In this research, the interview schedule

was the instrument used, and the questions were evaluated to make certain that they were appropriate to the subject and whether the variable of interest was actually being measured.

- Content validity

Content validity is concerned with the study's sampling adequacy. It intends to judge whether all possible observations were sampled for use. In this research, it would be by means of the interview schedule which, is concerned with how accurately, the questions that are asked, tend to illicit the information that was sought (Polit & Hungler 1997:375; Burns & Grove 1999:260).

Seaman (1987:318) and De Vos (2001:84), also states that content validity involves getting a panel of judges or experts in the field under study to review and analyze all items to see if they adequately represent the content universe. In this study, to test content validity, the instrument was given to the members of the multi-disciplinary team, namely:

- A psychiatrist from the Midlands Complex, who also practices privately.
- A psychologist who serves the district.
- A social worker from Umgeni Care & Rehabilitation Centre.
- Nurse educators from Iris Marwick Psychiatric College for Nurses.
- Community Health Services (Psychiatric) staff for the district.
- Medical Superintendent of Umgeni Care & Rehabilitation Centre.
- The Assistant Director of Midlands Care & Rehabilitation Centre.

- Rehabilitation Committee of Umgeni Care & Rehabilitation Centre.

The above members were requested to examine the instrument; to add items, which they felt were necessary; and to take out items which they deemed to be irrelevant. The instrument was also sent to the research project supervisor at the University of South Africa (UNISA). The research supervisors had no objections about the instrument containing the questions pertaining to the details of the mentally retarded patients.

- Face validity

Face validity is the extent to which the instrument appears to be logically appropriate by giving the appearance of measuring the content. The face validity of the instrument is important because the subjects, who are the mentally retarded people in the community of District 22 (sub-district 222), KwaZulu-Natal willingness to complete the instrument, was related to their perception that the instrument measures the content they agreed to provide (Seaman 1987:318; Burns & Grove 2001:400; De Vos 2001:84).

- External validity

External validity refers to the degree to which the results of a study can be generalized to settings or samples, other than the ones studied (Brink 1996:125). In this study the researcher provided a detailed description, so that someone, other

than the researcher could determine whether the findings of the study, were applicable in other settings or contexts, where the method of data collection was precisely and thoroughly reported (Brink 1996:124).

3.4.2.2 Reliability

Brink (1996:124); Polit and Hungler (1997:367) and De Vos (2001:85) agree that reliability refers to “the degree with which the instrument measures the attributes it is supposed to be measuring.” Therefore, reliability entails stability, consistency, accuracy, and dependability of a measuring instrument. The researcher adopted guidelines to ensure reliability of the validation results. The guidelines were:

- Clearly written and / or verbal instructions were given to the participants.

The respondents were ensured of anonymity, in order to encourage objectivity and honest debate.

3.5 ETHICAL CONSIDERATION

The development and implementation of policies on Mental Health Services is an inherently ethical endeavor. The outcomes and consequences of most health policy affect large groups of people (the mentally retarded people in this research).

It is therefore of great importance, that the researcher furnish the Department of Health with important and reliable information.

If the officials have reliable facts and research findings, then the policy makers will be able to identify problems, make comparisons, confirm trends, and establish policy based on evidence (Burkhardt & Nathaniel 2002:278-279).

Great care was taken by the researcher to protect the rights of the mentally retarded patients. Permission to conduct the research was requested through the Ethical Committee of the Midlands Complex in writing. The application was also referred to the Department of Health, KwaZulu-Natal. The Ethical Committee of the Complex and the Department of Health also consented to the researcher to continue with the research study.

The researcher also ensured protection of human rights, which 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 1999:157).

The ethical principles that the researcher needed to follow during the research process were as follows:

3.5.1 The right to self-determination

The right to self-determination, is based on the principle of respect for persons and indicates that humans are capable of controlling their own destiny (Burns & Grove 1999:

158). In this research, the participants were treated as “autonomous agents, who had a freedom to conduct their lives as they choose without external controls”.

In this research, the participants were informed about the research/study. The participants were allowed to choose to participate or not to participate in this study. The participants were also allowed to withdraw from the study without fear of any penalty. No deception or coercion was practised in the research as all participants were fully informed and also a full explanation was given to the participants in English, Afrikaans or Zulu, depending on their preferred language. As this research is done on persons who have diminished autonomy, due to mental incompetence, the researcher ensured that the participants required additional protection of their right to self-determination because of their decreased ability or inability to give informed consent.

The fact that the mentally retarded are legally and mentally incompetent to give informed consent, the researcher ensured protection of their right to self-determination as the individuals often lack the ability to comprehend information about the study, and to make decisions regarding participation or withdrawal from the study.

However this research is justifiable in that insight will be gained on the needs, services and facilities required by the mentally retarded patients so as to promote a comprehensive community based psycho-social well being of individuals and communities to develop to their maximum potential, which is in line with the de-institutionalization of the mentally retarded patient.

3.5.2 A right to privacy

The invasion of privacy is a major ethical issue in most research.

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 1999:162). In this research, the participant's privacy was protected by informed consent to participate in the study and voluntarily shared information with the researcher.

The participant's privacy was also protected in that they were informed that the data gathered was shared with only those involved in the research such, as the task members who are involved in the Strategic Plan for the Implementation of Mental Health Services in KwaZulu-Natal.

3.5.3 The right to confidentiality and anonymity

Confidentiality is the researchers management of private information shared by a subject (Burns & Grove 1999:163).

Anonymity is the right to “ assume that the data collected will be kept confidential”

(Burns & Grove 1999:163). In this research, anonymity of the subjects was maintained by coding of the questionnaires, and the fact that the names of the participants did not appear on the interview schedule.

The right to confidentiality is waived in this research when the participant agrees to take part in the research, as the information has to be made public in the research reports.

3.5.4 The right to fair treatment

The right to fair treatment is based on the principle of justice which states that “people should be fairly treated and should receive what they are due or owed” (Burns & Grove 1999:165).

In this research the right to fair treatment was ensured by the researcher in that:

- the participants were treated fairly and carefully,
- the researcher had high regard for any harm or discomfort experienced by the participants,
- random selection of participants was ensured.

3.5.5 The right to protection from discomfort and harm

This right was based on the ethical principle of beneficence, which states that one should do good, and above all do no harm (Burns & Grove 1999:166).

According to this principle, members of society should take an active role in preventing discomfort and harm and promoting good in the world around them.

Conducting this research was to bring about the greatest possible balance of benefits over harm, and for the participating individuals and society in general (Burns & Grove 1999: 166).

3.5.6 The right to informed consent

Informing, is the transmission of essential ideas and content from the researcher to the prospective participant.

Consent, is the prospective participants agreement to participate in the study as a subject (Burns & Grove 1999:168).

In this research, every prospective participant, to the degree of capability was given the opportunity to choose whether to participate in the research or not. In this research the following explanation was given to the participants.

- the purpose of the research,
- the objectives of the research,
- the research method or procedure that was used,
- the duration of the study,
- the type of participation expected from the subject,
- how the results were be used and published,
- the identity and qualifications of the researcher and supervisors,
- how confidentiality, anonymity and privacy would be ensured,

Due to the mental incompetence of the subjects to give consent, the researcher had to determine the competence of the subjects and explain the process to the subject's legal guardian.

3.6 PRETESTING OF THE INSTRUMENT

On completion of the questionnaire a small scale trial run was conducted. A pretest is a small- scale trial run of the major research study, which is done, before the actual major research can be carried out (Brink & Wood 1996:174). The reasons for conducting the pretest was to:

- determine any weaknesses in the administration and organization of the questionnaire
- enable the researcher to make any improvements and corrections before embarking on the actual data
- determine the length of time it would take the researcher and the subjects to complete the interview schedule
- ascertain the clarity and reduce any ambiguity in the wording of the questions
- establish the instruments content validity.

A pretest was conducted on six patients diagnosed with mental retardation who were purposely selected from Umgeni Care and Rehabilitation Centre. They were chosen from this Centre as it was convenient for the researcher. The registered nurse in charge of the Rehabilitation Committee was requested to note the clients that met the criteria for the research and then to refer them to the researcher.

The purpose of the research was explained to the respondents. Questions that were not clear to the respondents were rephrased. No undue pressure to answer any questions was

exerted to any respondent if he /she did not feel like answering. It took approximately 45 minutes to complete the interview schedule, which was regarded as too long considering the fact that they are mentally retarded. None of the respondents who participated in the pretest were included in the actual research. A few minor adjustments were made to the instrument.

3.7 ANALYSIS OF THE DATA

For this research, a computer was used to analyze the data.

Packaged computer analysis, such as the “Epi info version 6” which make it relatively easy to analyze data, was used.

The services of Informatics at the Department of Health, KwaZulu-Natal was sought to analyze data.

A statistician was consulted to interpret the meanings of the data being analyzed.

The analyzed data was discussed and forwarded to the task team members that are involved with the Strategic and Implementation Plan for the Delivery of Mental Health Services, Department of Health KwaZulu-Natal, to serve as a baseline for future evaluations of de-institutionalization policy and relevant legislation.

NB:

1. The median (mc) is that point on a scale of measurement with scores arranged in order of size above which exactly half the cases fall and below which the other half falls.
2. The mode (mo) is the most frequently occurring observation.
3. Mean refers to the sum of all scores divided by the number of scores.

3.7.1 Presentation of data

Data was presented in the form of:

1. Tables
2. Figures
3. Graphs

Based on the literature study, which was undertaken, the interview schedule, was designed to be used during the data collecting process. The aim was to assess their own perceptions of their needs, the services and facilities, of patients who are mentally retarded in the community of District 22 (sub-district 222), KwaZulu-Natal. All respondents were assured of anonymity as their names and addresses would not be revealed in the collected data.

3.8 SUMMARY

Being involved, in the needs assessment research can be an exciting opportunity for the researcher to contribute to the body of nursing knowledge and also the policy makers, thereby influencing changes in community health programmes and policies.

A quantitative, exploratory, descriptive research design was chosen and an interview schedule was used to collect data.

The interview schedule was tested for validity and reliability. The target group for this research was the mentally retarded patients from the community of District 22 (sub-

district 222), KwaZulu- Natal. These people were involved because their participation in their needs assessment might help to redress the imbalances between needs defined by “normal people” and those expressed by the persons suffering from mental retardation. Great care and concern were taken throughout the process of collecting the data, to protect their rights, as they were vulnerable human beings. An analysis of data collected from the completed interview schedule will be presented and discussed in Chapter 4.