

CHAPTER 2

Research design and methodology

2.1 INTRODUCTION

This chapter describes the research design and methodology, data collection and analysis, and measures for ensuring trustworthiness.

2.2 RESEARCH DESIGN

Burns and Grove (1997:225) and Uys and Basson (1991:38) define the research design as “the structural framework or blueprint of the study. This framework guides the researcher in the planning and implementation of the study, while achieving optimal control over the factors that could influence the study.”

A qualitative, exploratory, descriptive and contextual design was used for this study to gain insight into the voluntary counselling and testing (VCT) nurses’ perception of educating HIV-positive people about ARVs in Swaziland.

2.2.1 Qualitative

A systematic, subjective approach is used to describe life experiences and give them meaning. The qualitative researcher is interested in understanding how things occur and how meanings and interpretations are negotiated with human data because it is participants’ realities that the researcher tries to construct (Creswell 1994:62). The researcher is concerned about participants’ perspectives and the process rather than the outcomes, and analyses the data individually. In qualitative research, the researcher is the primary instrument for data collection and analysis. The researcher as a person interacts with the participants and is physically involved in the collection of data as an instrument. Qualitative research embraces a person as a whole and focuses on people’s experience in natural settings because it believes that people attribute meaning to their experiences and that their experiences evolve from life context. In qualitative research reality is considered

subjective and experiences are considered unique to the individual (Burns & Grove 1997:39). Since the researcher was examining nurses' perception, which is subjective, she undertook a qualitative and holistic study.

2.2.2 Explorative

The research study was exploratory because it wished to gain insight into and an understanding of VCT nurses' perception of educating HIV-positive people about ARVs. This information was obtained directly from the participants (nurses). Little is known about VCT nurses' perceptions of educating HIV-positive people about ARVs in Swaziland. The relative lack of information on this phenomenon in the specific context of participants actually involved in educating HIV-POSITIVE clients about ARVs in Swaziland necessitated this exploration. This meant that the researcher was "willing to explore new ideas and possibilities and not allow predetermined ideas and hypotheses to direct the research" (Mouton & Marais 1993:45; Polit & Hungler 1995:18).

2.2.3 Descriptive

The design was descriptive to provide "an accurate portrayal or account of characteristics of a particular individual, situation or a group" (Mouton & Marais 1993:43). The phenomenon was identified and described accurately and precisely. Description also involves "a narrative analysis of data, reliance on referential adequacy, which means enough reference is made to actual data to convince the reader of its authenticity" (Crowley 1995:59).

A descriptive design was selected because there are elements in life that are best described in words rather than in numbers (Podolefsky & Brown 1994:41). Perceptions cannot be easily quantified and need to be described in detail to get the meanings.

2.2.4 Contextual

Once the VCT nurses' perceptions of educating HIV-POSITIVE people about ARVs had been described, it was important to contextualise the findings. Walsh (2002:25) maintains that values direct human activities and thinking, consequently the researcher must take cognisance of the values within a certain temporal-spatial context. In this study the findings

are understood within a certain context, that is, nurses working at the Raleigh Fitkin Memorial Hospital VCT Centre in Swaziland.

2.3 METHODOLOGY

The methodology used to explore and describe the respondents' perception and develop guidelines to facilitate the education of HIV-POSITIVE people about ARVs included sampling and data collection.

2.3.1 Population and sampling

2.3.1.1 Population

Population refers to “all the elements that meet certain criteria for inclusion in a given universe” (Burns & Grove 1997:58). The target population for this study was VCT nurses who provide education to clients on ARVs in the Raleigh Fitkin Memorial Hospital in the Manzini region. In order to be included into the sample, the respondents had to be qualified nurses trained in voluntary counselling and testing, and presently working in a VCT centre. These nurses should participate voluntarily without being remunerated in any manner whatsoever.

2.3.1.2 Sampling

A sample is “a subset of the population that participates in the study” (Depoy & Gitlin 1994:304). The sample consisted of qualified nurses who had received voluntary counselling and testing training and were working in a VCT centre. In qualitative research, the adequacy of the sample refers to information adequacy, which means that data will be collected until no new information is obtained from participants. This is called data saturation. Information adequacy is not ensured by the number of participants interviewed, but by completeness and amount of information (Morse 1991:135).

◆ Sample selection

Permission to conduct the study was obtained from the management of the institution where the VCT services are rendered. Permission was sought verbally and in writing.

Purposive sampling was used to include participants in the study. Purposive sampling is also referred to as judgmental sampling and involves the conscious selection of participants by researchers (Burns & Grove 1993:218). The “logic behind purposeful selection of sample in qualitative research is to identify information-rich participants who can supply the data required to answer the research questions” (Crowley 1995:59).

Participants “are selected to be representative of the group or attributes of the population in which the phenomenon is explored” (Ackroyd & Hughes 1992:100). In this study, VCT nurses who were willing to share their perceptions of educating people about ARVs met the criteria and were selected to participate (De Vos 1994:253; Morse 1991:129).

◆ **Sample criteria**

In terms of inclusion criteria, “the decisive factor is the knowledge of the topic of phenomenon under examination. It helps to prevent biases due to data contamination by people who do not possess the characteristics necessary” (Polit & Hungler 1999:296).

Nurses who had undergone VCT education, presently working in a VCT centre and willing to share their experiences freely and fully were selected for the study.

2.3.2 Data-collection instrument

Data collection is the process by which the researcher collects the information needed to answer the research questions. Data was collected by means of semi-structured in- depth interviews with open-ended questions to ensure full and free sharing of information on the perceptions of educating clients about ARVs. In semi--structured interviews, participants are able to reveal relevant information in a natural way and have the opportunity to qualify their answers and explain the underlying meaning of their responses in detail (Polit & Hungler 1995:252).

Interviews are more effective in getting at people’s complex feelings or perceptions and allow the researcher to get clarification on responses, reword or rephrase questions to be easily grasped by participants (Wilson 1993:24-25). The interview process “not only provides a record of the participants’ views and perceptions, but also symbolically recognises the legitimacy of their point of view” (Stringer 1996:62). An appointment was

made beforehand with the participants. Interviews were tape-recorded and continued until data saturation had occurred. According to Lincoln and Guba (1985) (in Streubert & Carpenter 1995:22), saturation is reached when there is a “repetition of salient points (themes) and redundancy of the data being collected”.

◆ **Researcher’s role**

The researcher ensured an atmosphere conducive to interviewing by applying the following measures:

The interviews were held in a natural setting in the respondents’ workplace to ensure that they were relaxed and could speak freely (Mays & Pope 1996:34). The place was quiet to afford audibility, clarity and privacy. The respondents’ right to withdraw from the study at any time was assured.

In this study, the researcher took observational, theoretical, methodological and personal field notes. Observational notes (ON) were descriptions of events experienced through watching and listening during an interview. Walsh (2002:89) states that ON contain the “who, what, how and where” of a situation, and as little interpretation as possible. Theoretical notes (TN) were purposeful attempts to derive meaning from the ON. The researcher interpreted the observations in order to build her analytical scheme. Methodological notes (MN) were instructions to the researcher, reflecting on her tactics and reminders about methodological approaches that might be fruitful. Personal notes (PN) were notes about the researcher’s own relations, reflections and experiences.

2.3.3 Pilot study

A pilot study is “a small version of proposed study conducted to develop and refine the methodology such as the instrument and data-collection process” (Burns & Grove 1999:38). In order to test the data-collection instrument, the researcher conducted a pilot study with two respondents who were not part of the main study.

2.3.4 Data analysis

In qualitative research data analysis is an ongoing process, interspersed throughout data-collection activities. Data collection and analysis are interdependent processes. As researchers collect the information, they engage in an active analysis of the data and this frames the scope and direction of further data collection (Depoy & Gitlin 1994:131).

In this study, a comprehensive description of each theme was obtained through concurrent data analysis and collection, because the analysed data informed and gave direction on what information was necessary. The researcher transcribed and analysed the audiotape interviews to identify themes and categories. Creswell (1994:15) states that the data analysis process “requires that the researcher be comfortable with the categories and making comparisons and contrasts. The researcher must be open to possibilities and alternative explanations of the findings.” Data analysis was done after verbatim transcription of the interviews. The data analysis was done using Tesch’s (1990) eight-step method (in Creswell 1994:154-155) as follows:

- (1) The researcher gained a sense of the whole by reading through the transcriptions of the interviews.
- (2) The researcher picked up the shortest and most interesting interview transcript, read through it to get an idea of what it was about and the underlying meaning.
- (3) After completing the task for several participants, the researcher made a list of topics. Similar topics were clustered together and columns drawn for major topics, and unique topics left out. The list was compared with the data, topics abbreviated and codes written next to the segment of the text. The researcher wrote out the preliminary organisation to see whether new categories and codes emerged.
- (4) The most descriptive wording for the topics was found and turned into categories.
- (5) Related topics were grouped together, the categories reduced and lines drawn between categories to show interrelationships.
- (6) A final decision was made on the abbreviation for each category.
- (7) Data material belonging to each category was assembled and preliminary analysis done and themes arranged in order of priority and not alphabetical order, for logical coherence.
- (8) The codes were referred back to the original data to identify whether any data was left that should be part of the codes. The categories and themes were referred back

to the participants to find out whether they were accurate and a true reflection of their experiences in order to ensure the credibility of the study findings (Crowley 1995:59). Consensus was reached that the themes presented were their experiences.

2.4 TRUSTWORTHINESS

Lincoln and Guba's (1985:299) model was applied to ensure trustworthiness of the study. Trustworthiness exists if the findings of a qualitative study represent reality. The four criteria for trustworthiness are credibility, transferability, dependability and confirmability (Streubert & Carpenter 1995:29). Table 2.1 represents the application of trustworthiness to the study.

Table 2.1 Application of trustworthiness

STRATEGY	MEASURE/CRITERION	APPLICABILITY
Credibility	Prolonged engagement	Researcher spent about 15-20 minutes with each participant to build rapport, explaining purpose of the study and ethical issues involved. Researcher spent 45-60 minutes in conversation with participants.
	Member checking	After each interview, the interview was played back to the participants to approve it.
	Authority of researcher	Researcher has undergone training in research methodology. A qualified researcher supervised the study.
	Structural coherence	The focus throughout the study was the nurses' perceptions of educating HIV-positive clients about ARVs in a VCT centre in Swaziland.
	Literature control	Findings were discussed with reference to relevant studies and articles to establish commonalities and compare findings.
	Triangulation	The researcher used in-depth individual semi-structured interviews and field notes to collect data as well as triangulation, and a qualitative, exploratory, descriptive and contextual design.
	Peer examination	A peer who is also a researcher reviewed and critiqued the study and made recommendations.
	Reflexibility	The researcher examined her own perspective and this helped her to assess the insight, understanding and knowledge gained. This minimised biases.
Transferability	Sampling	Purposive sampling of VCT nurses was used.
	Data collection	Interviews were conducted until saturation was reached.
	Dense description	Comprehensive description of methods was given, including codes and respondents' direct responses.
Dependability	Dependability audit	Use of researcher's supervisor as a debriefer.
	Dense description	Research methodology was clearly and fully described.
Confirmability	Bracketing and intuition	The researcher used bracketing and intuition during data collection and analysis.
	Confirmability audit	An independent researcher conducted an audit.

2.5 ETHICAL CONSIDERATIONS

Ethical considerations are important in research and include ethical conduct towards participants' information as well as honest reporting of the results. For this reason the ethical standards laid down by the Democratic Nursing Organisation of South Africa (Denosa 1997) were adhered to in this study.

2.5.1 Quality of the research

The researcher adhered to standards of research planning, implementation and reporting. The standard of conduct, including supporting and opposing views, and being aware of personal biases and values, were strictly observed.

The research findings were reported fully, without purposefully omitting significant data and making explicit all methods and research design which might influence interpretation. The research supervisor, who is a person with great knowledge, skills and experience in research, ensured that the research was conducted in a moral, just and valid way.

2.5.2 Consent to conduct the study

Permission to conduct the study was requested in writing and verbally. Written permission was obtained from the senior sister of the VCT centre where the study was conducted. Verbal permission was obtained from participants in the study and this was tape-recorded at the beginning of the interview. The participants and the senior sister of the institution were informed of all data collecting devices and activities.

2.5.3 Confidentiality and anonymity

Confidentiality means any information that participants divulge will not be made public or available to others. When the participant agrees to be part of the research the right is waived since the information has to be made public in a research report. Anonymity of any person or institution is protected in the report by making it impossible to link aspects of the data to a specific person or institution. In this study, the names of the participants were not used. Codes and pseudonyms were used.

The participants were assured of anonymity and confidentiality. The data and participants' names were always kept separate, thus linkages of data to participants was not possible. The tapes were destroyed after completion of the study.

2.6 PRIVACY

Privacy means that a person can behave or think without interference of possible private behaviours or thoughts which may be used to embarrass or demean him/her later. The rights, interests and wishes of participants were ensured at all times as well as privacy so that participants can think and share the information experiences without any interference. The researcher collected only the necessary information.

2.6.1 Dissemination of the information

A copy of the research report will be handed to the facility where the study was conducted. The information will be published in relevant journals. The participants will be informed of the research outcomes if they so desire.

2.7 TERMINATION

The researcher explained the participants' right to withdraw from the study to each one. Qualitative research methods do not permit faking data in order to get better or more desired results. Researchers' approaches and commitment to academic research or work must be trusted (O'Dea 1994:161-171).

In this study, fabricating the results would help neither the researcher nor the Ministry of Health in Swaziland who need to improve health services rendered to the people in this era of HIV/AIDS.

2.8 CONCLUSION

This chapter covered the research design, including the research strategy, data collection and analysis, trustworthiness, and ethical considerations. Chapter 3 discusses the literature review undertaken for the study.