

## CHAPTER 3

### Research methodology

#### 3.1 INTRODUCTION

This chapter focuses on the research design and methodology, including population, sampling, data collection and analysis, ethical considerations, and trustworthiness.

#### 3.2 PURPOSE OF THE STUDY

The study had a twofold purpose, namely to

- explore and describe factors influencing cervical cancer screening programme implementation within private health care sectors in Soshanguve
- formulate guidelines for cervical cancer screening in private health care sectors.

#### 3.3 RESEARCH DESIGN

The researcher conducted a qualitative study that was explorative, descriptive and contextual in order to gain a rich understanding of the phenomenon (cervical cancer screening) as it exists in the real world (private medical practices) (Polit & Beck 2004:247).

##### 3.3.1 Qualitative

The researcher adopted a phenomenological (qualitative) approach, using semi-structured interviews and observation as data-collection techniques (Polit & Beck 2004:253). During the interviews narrative-descriptive data was collected (Polit & Beck 2004:33). The researcher also observed the settings in order to validate (or support) the data.

### **3.3.2 Explorative**

Burns and Grove (2001:374) maintain that explorative research is meant to increase the knowledge of the field of study. In this study factors influencing cervical cancer screening programme implementation within private health care sectors in Soshanguve were explored through semi-structured, in-depth, individual interviews. The interviews allowed the respondents to respond freely to the phenomenon under study (Collins, Du Plooy, Grobbelaar, Puttergill, Terre Blanche, Van Eeden, Van Rensburg & Wigston 2000:177). The respondents were asked to answer the question: "What are the factors influencing cervical cancer screening programme implementation within private health care sectors in Soshanguve?"

### **3.3.3 Descriptive**

According to Polit and Beck (2004:192), descriptive research is used "for identifying problems with current practice, justifying current practice, making judgment or determining what others in a similar situation are doing". The researcher found a descriptive approach most appropriate as it allowed her to obtain more information about characteristics of private medical practitioners within their practices, thus providing a picture of the situations as they naturally happen (Burns & Grove 2001:248). The data was collected in the natural settings (the practices of private medical practitioners), which were uncontrolled, real-life situations. These settings (practices/surgeries) allowed the researcher to study the context of the participants' experiences as lived (Polit & Beck 2004:26). There was no manipulation of the data or interference with the settings.

### **3.3.4 Contextual**

The findings were contextualised once the factors that influence cervical cancer screening programme implementation were described. Since the study was conducted in the consulting rooms of private medical practitioners at Soshanguve, the findings will also be discussed within that context.

### 3.4 RESEARCH METHODOLOGY

In accordance with its twofold purpose, the study comprised two phases. In phase 1, the researcher examined and described the factors influencing the implementation of cervical cancer screening within private health care sectors in Soshanguve. In phase 2, the researcher formulated guidelines for cervical cancer screening in private health care sectors.

In order to examine the factors influencing cervical cancer screening programme implementation among private medical practitioners, the researcher conducted the study in the private settings of the respondents' consulting rooms. A covering letter (see annexure A), explaining the nature and purpose of the study and requesting their participation, was sent to the respondents. Once the respondents agreed to take part in the study and to the interviews being tape-recorded, they were asked to read and sign a letter of consent (see annexure B). Ethical considerations were also outlined in the letter of consent. The ethical considerations are discussed in section 3.7.

#### 3.4.1 Population

Polit and Beck (2004:289) define population as "the entire aggregation of cases in which a researcher is interested". The population for this study therefore was all medical practitioners who were registered with the HPCSA and owned private practices in Soshanguve. The accessible and target populations within the entire population were then identified. Polit and Beck (2004:290) define target population as "the aggregate of cases about which the researcher would like to make generalisations". All the private medical practitioners in Soshanguve were the target population in this study. Polit and Beck (2004:290) define accessible population as "the aggregate of cases that conform to the designated criteria *and* are accessible as a pool of subjects for the study".

Polit and Beck (2004:290) refer to the specific criteria for inclusion in a population as "eligibility criteria or inclusion criteria". In the present study, only those medical practitioners who were registered with the HPCSA and owned private medical practices in blocks AA, BB, DD, F, G, GG, H, K, L, LL, M, UU and WW, Soshanguve were included in the population. Polit and Beck (2004:309) emphasise that "all respondents must have experienced the phenomenon under

study and must be able to articulate what it is like to have lived that experience". As a result, it was important that the respondents had conducted cervical cancer screening tests in their practices. In this study, the accessible population was all the eligible private medical practitioners who were involved in cervical cancer screening.

### **3.4.2 Sampling and sample size**

Polit and Beck (2004:305) point out that most qualitative studies use small, non-random samples. Qualitative research attempts to discover meaning and uncover multiple realities. As it is not the intention of qualitative research to generalise the findings, randomness is not a desirable tool if a qualitative researcher wishes to fully understand a phenomenon. Qualitative researchers are interested in information-rich data sources. Hence it is important for them to carefully select their respondents in order to maximise, enrich and confirm the understanding of the phenomenon under study.

Polit and Beck (2004:40) indicate that qualitative researchers generally use information obtained early in the study in a purposive (non-random) way as it serves to guide their enquiry. Researchers are then able to pursue information-rich sources that can help them expand or refine their conceptualisation. Consequently, it is important that the sample is chosen on the basis of the researcher's knowledge of the population in which the study is to be conducted (Babbie 1992:230). In this study, the researcher used purposive or judgmental non-probability sampling as the most appropriate to select the respondents. Polit and Beck (2004:294) state that "purposive or judgmental sampling is based on the belief that researchers' knowledge about the population can be used to hand-pick sample members".

The researcher had to select respondents who were knowledgeable about the phenomenon and would benefit the study. Babbie (1992:230) indicates that the subset of the study population should be easily identifiable. The medical practices were highly concentrated within Soshanguve and all had identifiable advertisement boards at their surgeries, clearly indicating the nature of the practice (surgery/medical practitioner). Despite the fact that they were identifiable, they were not all accessible. It was thus not feasible to define and sample all the private medical practitioners in Soshanguve. The best strategy was criterion sampling to target respondents who

met the predetermined criteria (Polit & Beck 2004:307). Bowling (1997:338) points out that qualitative interviewing is usually based on small sample sizes due to the complexity of data that are expensive and time consuming to analyse. Sampling is continued until the point at which no new information is obtained and redundancy or data saturation is achieved (Polit & Beck 2004:312). According to Bowling (1997:338), when the same stories, themes, issues and topics emerge from the respondents, it is clear that a sufficient sample size has been reached.

### **3.4.3 Data collection**

The researcher used interviews, observation and a structured questionnaire (see annexure C) as data-collection methods. The interviews were tape-recorded and the researcher took detailed field notes during the sessions. The audiotapes were subsequently transcribed immediately after the interviews. Thus the researcher was able to capture all the responses without losing any valuable data. All the audiotapes and notes were carefully labelled (Polit & Beck 2004:334). Demographic information about the respondents was obtained in a structured questionnaire.

The researcher went into the field knowing the likely sources of data but not what to expect. The semi-structured, in-depth interviews with the individual respondents were the primary data-collection tool. The advantages of semi-structured interviews were that more complex issues could be triggered, answers could be clarified and more in-depth as well as sensitive information could be obtained (Bowling 1997:337). Interviews allow for personal contact and interaction between interviewer and interviewee or respondent (Collins et al 2000:176).

To further enrich and support the data, the researcher's observations and field notes formed part of the study as well. The researcher gathered the following information about the settings: the adequacy of seating in the waiting rooms, the availability of television sets, the temperature in the waiting rooms, type(s) of posters displayed on the walls, the gender and age groups of patients in the waiting rooms, the number of medical practitioners doing consultations, the duration of consultations, the arrangement of the examination room, the number of receptionists and their gender, and the accessibility of the medical practices.

The semi-structured, in-depth face-to-face individual interviews allowed the respondents to respond freely. In this way, detailed information was obtained from the respondents. The interviews were conducted at each respondent's setting. The open-ended interviews encouraged respondents to explain their attitudes, emotions, ideas, sentiments, suggestions or opinions in their own words (Collins et al 2000:179). The respondents were asked a broad question relating to the research topic: "What are the factors influencing cervical cancer screening programme implementation within private health care sectors in Soshanguve?"

Several factors that influence cervical cancer screening among private medical practitioners were identified during the interview sessions. As the researcher was interested in the individual medical practitioners' perceptions of the programme and its implementation, only open-ended questions were asked. This allowed the respondents to speak freely about their experiences. A total of six face-to-face interviews were conducted to collect information and the sample size was determined by the saturation of themes. In all six interviews, the first question was the same. Follow-up questions were asked depending on the respondents' response to the research question.

Demographic data collected with a structured questionnaire included the respondents' gender and age, the institutions at which they trained, the year in which they qualified, the period they spent in the gynaecological wards and/or clinics during their training, as well as their length of practice in both the public and the private sector.

#### **3.4.4 Data analysis**

The data analysis helped the researcher to organise, structure and elicit meaning from the data. Data collection and analysis occurred simultaneously since the researcher searched for important themes and concepts from the commencement of data collection (Polit & Beck 2004:570). The audiotapes and field notes were the main data sources and the tapes were transcribed verbatim for analysis (Polit & Beck 2004:572).

To analyse the data, the researcher first read through the data to identify meaningful segments and units. Then the segments were reviewed. Finally, concepts and themes were categorised.

Polit and Beck (2004:573) point out that “another early step in analysing qualitative data is to organise them by classifying them.” During this step, the data was converted to smaller, more manageable units that could be retrieved and reviewed. These units were carefully studied in order to identify concepts and clusters that could then be categorised. The researcher developed corresponding codes to sort and organise data. Data was coded according to developed categories and the related concepts were later grouped together to facilitate the coding process (Polit & Beck 2004:573).

The researcher searched for patterns and structures that connected the thematic categories. Themes were identified and then sub-themes. The findings were reflected within the health services evaluation model. Finally, the researcher formulated guidelines for cervical cancer screening programme implementation (see chapter 5 for discussion).

### 3.5 MEASURES FOR ENSURING TRUSTWORTHINESS

Qualitative researchers are concerned with data quality and reflecting the true state of human experiences (Polit & Beck 2004:430). Polit and Beck (2004:430) refer to Lincoln and Guba’s (1985) four criteria for establishing the trustworthiness of qualitative data, namely true value, consistency, neutrality and applicability. Table 3.1 below represents the four criteria.

**Table 3.1 Lincoln and Guba’s (1985) model of trustworthiness of qualitative research**

<b>CRITERION</b>	<b>QUALITATIVE APPROACH</b>
True value	Credibility
Consistency	Dependability
Neutrality	Confirmability
Applicability	Transferability

(Polit & Beck 2004:430)

### 3.5.1 Credibility (true value)

Credibility or true value means whether the researcher has established confidence in the truth of the findings and the context in which the study was undertaken. Polit and Beck (2004:430) state that "credibility refers to the confidence in the truth of the data and interpretations of them". Lincoln and Guba (1985) (cited in Polit & Beck 2004:430) maintain that "credibility involves two aspects: first, carrying out the study in a way that enhances the believability of the findings, and second, taking steps to demonstrate credibility to consumers".

The researcher is a qualified cytotechnologist, is employed as a lecturer in the subject at the Tshwane University of Technology and has thirteen years' experience in the field. The researcher also runs a private cytology practice where she receives mainly Pap smears for cytology investigation. She has participated in research capacity building (RCB) projects and attended a one-month course in health systems research (HSR).

Prior to data collection, the researcher conducted three pilot interviews which she transcribed and sent to the supervisor and co-supervisor for comments. The researcher used triangulation of data collection techniques and research designs. The evaluation of health services model was used to provide structure to the findings. The researcher sent her work to the RCB participants for criticism. Throughout the study the researcher sent her work through to her supervisor and joint supervisor for correction and comments. She took field notes of the settings during the interviews. The duration of the interviews was 30 to 45 minutes which prolonged the interaction between the interviewer and the respondent. The respondents read the transcripts for verification and comments.

Prolonged engagement enhanced the respondents' trust in the researcher (Polit & Beck 2004:430). Accordingly, the respondents felt comfortable about providing accurate and rich information about the phenomenon under study. External validation of the study was acquired through peer debriefing. The researcher held sessions with peers to review and explore various aspects of the study. The researcher used Lincoln and Guba's (1985) (cited in Polit & Beck 2004:432) member checking to establish the credibility of data collected. Feedback was provided to the respondents on the data and interpretations for confirmation, clarification and comments.

### **3.5.2 Transferability (applicability)**

Lincoln and Guba (1985) (cited in Polit & Beck 2004:435) indicate that transferability refers to the degree to which the findings can be applied to other contexts and settings or with other groups, thus generalising the findings to a different or larger population. However, in this study each situation was unique and therefore less amenable to generalisation. For the research findings to be transferable, the researcher provided sufficient descriptive data to allow comparison.

According to Polit and Beck (2004:435), researchers can only provide the thick description, but it remains the responsibility of those wanting to transfer the findings to another situation to locate transferability. Polit and Beck (2004:436) describe thick description as a rich and thorough description of the research setting or context and of the transactions and processes observed during the enquiry. This is necessary to enable others to reach a conclusion on whether a transfer could be made.

In this study, sufficient data was therefore made available to enable other researchers to decide on its transferability. This chapter has described the research methodology fully. The demographic data as well as the description of the settings are discussed in detail in chapter 4 as part of the research findings.

### **3.5.3 Dependability (consistency)**

Polit and Beck (2004:434) state that the dependability of data refers to stability over time and conditions. They describe dependability as the consistency of the findings in case the inquiry is replicated with the same subjects or in a similar context. An inquiry audit is a technique that involves a scrutiny of the data and relevant supporting documents by an external reviewer (Polit & Beck 2004:435).

For consistency, the research methodology of this study has been described in detail. The tape recordings, transcriptions, field notes, forms, letter of consent, and a demographics questionnaire used have been preserved for future auditing. Some of these documents are also included in the annexure of this study.

### 3.5.4 Confirmability (neutrality)

According to Polit and Beck (2004:435), confirmability refers to “the objectivity or neutrality of the data, that is, the potential for congruence between two or more independent people about the data’s accuracy, relevance, or meaning”. Confirmability is established through inquiry audits by developing an audit trail. Polit and Beck (2004:435) define an audit trail as “a systemic collection of materials and documentation that allows an independent auditor to come to conclusions about the data” and point out six classes of records of special interest in creating an adequate audit trail:

- the raw data (for example field notes, interview transcripts)
- data reduction and analysis products
- process notes (for example methodological notes, notes from member check sessions)
- materials relating to researchers’ intentions (for example reflexive notes)
- instrument development information (for example pilot forms)
- data reconstruction products (for example drafts of the final report)

The above listed items are in safekeeping and available for future audit of this study.

## 3.6 ETHICAL CONSIDERATIONS

Collins et al (2000:107) state that “ethics, in research, have been developed against the background of professional codes of conduct and the laws governing a particular country. Ethics should be morally justifiable on the other hand.” In research the three most important ethical issues are do no harm, obtain consent, and ensure privacy (Collins et al 2000:109). Polit and Beck (2004:143) maintain that the principle of beneficence is the most fundamental principle in research.

Burns and Grove (2001:200-209) state that the purpose for an investigation has to be ethical. This means that the participants’ rights and the rights of others in the study are to be protected. In this study, the researcher informed the respondents that participation in the study was

voluntary, guaranteed confidentiality and obtained written consent from them. The research proposal was submitted to the University of South Africa for approval.

### **3.7 CONCLUSION**

This chapter discussed the research design and methodology, including sampling, data collection and analysis, and ethical considerations. The researcher's qualifications, experience and interest were also briefly discussed.

Chapter 4 discusses the findings of the study.