

CHAPTER 3

Research design and methodology

3.1 INTRODUCTION

Methodology and research design direct the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal. It is a blueprint for conducting the study (Burns & Grove 1998:745). This chapter describes the research design and methodology, including sampling and data collection and analysis.

3.2 DEFINITION OF *METHODOLOGY*

Mouton (1996:35) describes methodology as the means or methods of doing something. Polit and Hungler (1999:648) refer to it as the process of following the steps, procedures and strategies for gathering and analysing the data in a research investigation. These methods describe in detail how the study was conducted. According to Burns and Grove (1998:581), methodology includes the design, setting, sample, methodological limitations and the data-collection and analysis techniques in a study. This is the know-how of the scientific methods and techniques employed to obtain valid knowledge.

Qualitative methodology is dialectic and interpretive. During the interaction between the researcher and the research participant, the informant's world is discovered and interpreted by means of qualitative methods (De Vos 1998:242).

In this study the researcher employed phenomenological methodology. Phenomenology is a science whose purpose is to describe particular phenomena, or the appearance of things, *as lived experiences* (Streubert & Carpenter 1999:43). However, phenomenological research methodology is difficult to explain because it has no clearly defined steps. This is due, in part, to the reluctance of phenomenologists to place major emphasis on time or sequence of events. Phenomenologists are of the opinion that the clear definition of methodology tends to limit researchers' creativity (Burns & Grove 1998:82). The concept *phenomenology* is described in section 3.5.

3.3 LITERATURE REVIEW ON APPROACHES TO ASPECTS OF PAIN

Much research has been conducted on different aspects of pain, such as the experience of general pain, labour pain and the cultural aspects in experiencing labour pain.

3.3.1 Pain in general

Various approaches have been adopted to investigate the aspect of pain in general.

Vlaeyen, Pernot, Kole-Snijders, Schuerman, Van Eek and Groenman (1990:337) adopted a descriptive quantitative approach to study pain behaviour among patients with chronic pain.

Beyer and Wells (1989:841) assessed pain in children by means of a descriptive quantitative approach, using pain measurement tools such as self-report measures, to describe pain. Beyer and Wells utilised three types of measures to assess the pain experience, namely physiological, self-report and behavioural measures.

Physiological variables are useful in examining the pain experience associated with short-term medical procedures, but there are no physiological responses that directly reflect patients' perception of pain. As self-report measures, Beyer and Wells used a pain experience history and a pain interview to facilitate the description of the pain experience as well as explain what the patients needed to be comforted. Behavioural measures involved observing the patients because the subjective state of suffering can only be known through observation of pain behaviour (Beyer & Wells 1989:840-841). In the present study, however, the researcher did not use observation as a research method.

In a study of the history of pain management, Donovan (1989:257) found that over the centuries the knowledge and theories about pain have evolved through six stages. Beliefs and practices related to pain from all these stages continue to influence contemporary attitudes and practices regarding pain. Optimal pain control demands the integration of all that is known about pain into a holistic approach that benefits the patient experiencing pain.

3.3.2 Labour pain

In a study on labour pain, Jimenez (1996:53) adopted a descriptive phenomenological approach to establish a common vocabulary for exploring issues of pain and discomfort. The purpose of the study was to explore practice, research and theory related to the management of pain and of discomfort in

childbearing women.

Gibbins and Thompson (2001:304) also employed a phenomenological approach to study the expectations and experiences of women during labour. The purpose of utilising the phenomenological approach was to describe the meaning of an experience from the perspective of those involved in the experience. In this study, unstructured interviews were used to collect data, which allowed flexibility and made it possible for the researcher to follow the interests and thoughts of the participants.

In a study on midwives' experiences with women and their pain during labour, Lundgren and Dahlberg (2002:155) adopted a phenomenological approach. The purpose of the study was to elicit the effect of support regarding the labour pain experience.

Holroyd et al (1997:66) utilised the Lazarus cognitive-phenomenological model of stress, appraisal and coping as a theoretical basis for their study of Hong Kong Chinese women's perception of support from midwives during labour. This provides a comprehensive basis for conceptualising the experience of labour.

To study the psychological factors influencing personal control in pain care, McCrea et al (2000:493) used an exploratory research design and methodology. Personal control was measured using a 36-item 7-point Likert scale. Measures of psychological factors included assessment of women's expectations of labour pain, maternal confidence, pain intensity, antenatal training and partner support.

3.3.3 Cultural aspects of labour pain

Machin and Scamell (1997:78) used ethnography to examine the experience of labour in a transcultural study. Ethnographic research gives a sense of the range of different experiences that women might have. Machin and Scamell (1997:82) used mainly participant and non-participant observation supplemented by tape-recorded, semi-structured interviews with each woman.

Callister and Vega (1998:289) also used ethnography as a research method to gain an insight into the cultural meanings of giving birth among Guatemalan women. Audio-taped interviews were conducted following an explanation of the study, its voluntary nature, and respondents' consent to participate.

Choudhry (1997:533) adopted an ethnohistorical approach to study the traditional practices of women from India who had migrated to North America and Canada. Choudhry found that, as in all cultures, the women had certain beliefs about what facilitates a good pregnancy and its outcome, as well as negative sanctions. Cultural beliefs and practices positively or negatively influenced the women's experience of labour pain.

Most of them preferred home delivery attended by a local, untrained midwife (*dai*) or by a birth attendant who was an experienced village woman.

In an ethnographical study, Howard and Berbiglia (1997:665) found that stoic endurance of pain during labour was encouraged among Korean women because some believed that the '*samshin*' goddess of three spirits dislikes the screaming, or is simply embarrassed about the situation of delivery.

Khalaf and Callister (1997:373) conducted a descriptive, ethnographic study on the experiences of childbirth for Muslim women living in Jordan. Khalaf and Callister interviewed thirty-two women in the early postpartum weeks and identified the women's motivation for having children, what constitutes motherhood, and the importance of relying on God or Allah for support in bearing and rearing children. Khalaf and Callister also identified a strong sense of the spiritual dimensions of giving birth within the women's traditional, religious, and cultural context.

Chesney (1998:57) made use of ethnographic/oral history to study dilemmas of interviewing women who had given birth in Pakistan. Unstructured interviews, participant observation and an autobiography, written as a reflective diary were used.

Callister (1992:50-52) adopted a phenomenological approach to investigate the meaning of the childbirth experience for Mormon women. A non-probability sample of 26 primiparous mothers who had uncomplicated vaginal births of healthy full-term infants participated in the interviews conducted in their homes within two weeks of giving birth.

Finn (1994:25) used phenomenology to study culture care of Euro-American women during labour and childbirth, using Leininger's sunrise model. The participants' descriptions of their lived experiences were analysed using Collaizziz's (1978:51) phenomenological method. This method of analysis was selected because it was based on Collaizziz's philosophical perspective, which focuses on in-depth study of phenomena and other characteristics of qualitative research. Collaizziz emphasised that researchers must list their assumptions and preconceptions and suspend or bracket these assumptions so as not to influence the outcome.

Todres and Wheeler (2001:2) explored what philosophical distinctions need to be incorporated in studying "human experience" and stated that these philosophical distinctions can be broadly approached in three areas:

- Grounding: the "real life-world" as starting point.

- Reflexivity and positional knowledge: a hermeneutical turn.
- Humanisation and the language of experience: the existential move.

Todres and Wheeler (2001:1) focused on identifying phenomenological elements that could provide focus and direction for qualitative research in nursing. They found that grounding, reflexivity, and humanisation are particularly important for nursing research.

3.4 RESEARCH DESIGN

The present study is an exploratory, descriptive and contextual qualitative study in transcultural nursing. The researcher employed a phenomenological research design and methodology to achieve the objectives of this study based on the literature review (see especially section 3.3 above). In this regard, the following terms are defined next: *qualitative, exploratory, descriptive, contextual nature, transcultural nursing research and epistemology*.

3.4.1 Definitions

3.4.1.1 Qualitative research

Qualitative research refers to inductive, holistic, emic, subjective and process-oriented methods used to understand, interpret, describe and develop theory on a phenomenon or a setting and is a systematic, subjective approach used to describe life experiences and give them meaning (Morse & Field 1996:199; Burns & Grove 1998:35). Brink and Wood (1998:335) cite Benoliel's (1984) description of qualitative research "as modes of systematic inquiry concerned with understanding human beings and the nature of their transactions with themselves and with their surroundings". Leininger (1985:5) defines qualitative research as the methods and techniques of observing, documenting, analysing, and interpreting attributes, patterns, characteristics and meanings of specific, contextual or gestalt features of a phenomenon.

3.4.1.2 Attributes of qualitative research

Qualitative research adopts a person-centred and holistic perspective. It develops an understanding of people's opinions about their lives and the lives of others. It also helps the researcher to generate an in-depth account that will present a lively picture of the research respondents' reality (Holloway & Wheeler 1996:8). In qualitative research, the researcher is required to be a good listener, non-judgmental, friendly, honest and flexible. The researcher works from the point of understanding the research respondents without imposing pre-existing expectations (Mouton & Marais 1992:204). Qualitative research is a form of

content analysis covering a spectrum of approaches ranging from empirical phenomenological psychology to hermeneutical-phenomenological psychology, depending on the data source (Holloway & Wheeler 1996:2-3; Van der Wal 1999:55). Qualitative research includes ethnography, phenomenology, grounded theory and historical research. A number of features are common to all approaches but the origins of the approaches are different. Ethnography, for example, originates from anthropology, which is concerned with the study of culture. Phenomenology has its base in philosophy and is concerned with the 'lived experience' as perceived by the informant, while grounded research has been developed from the discipline of sociology. Historical research offers an understanding of past events (Rosalind 1997:232).

When working with the Mozambican women, the researcher did not pressurise them to describe how they experience labour pain, but allowed them ample time to respond in a way they felt suitable.

Qualitative data collection methods are flexible and unstructured, capturing verbatim reports or observable characteristics and yielding data that usually do not take numerical form. Words, film, postcards, art, and all sensory data are considered qualitative data unless they are transformed into some numerical system (Brink & Wood 1998:5).

Qualitative research is specifically characterized by the following (Brink & Wood 1998:246; Burns & Grove 1997:335):

- Uses an inductive form of reasoning: develops concepts, insights and understanding from patterns in the data.
- Uses an emic perspective of inquiry: derives meaning from the participants' perspective.
- Is idiographic: thus aims to understand the meaning that people attach to everyday life.
- Regards reality as subjective.
- Captures and discovers meaning once the researcher becomes immersed in the data.
- Concepts are in the form of themes, motifs and categories.
- Seeks to understand phenomena.
- Observations are determined by information richness of settings, and types of observations used are modified to enrich understanding.
- Data are presented in the form of words, quotes from documents and transcripts.
- Data are analysed by extracting themes.
- The unit of analysis is holistic, concentrating on the relationships between elements, concepts and so on.
- Qualitative researchers tend to use words as the basis for analysing rather than numerical data.

- The whole is always more than the sum.

3.4.1.3 *Indications for the use of qualitative research*

Qualitative research is a tool by which researchers can examine the context of existing gestalts or sedimented views. The concept *gestalt* is closely related to holism. This view proposes that knowledge about a particular phenomenon is organised into a cluster of linked ideas or gestalt (Burns & Grove 1998:7; Brink & Wood 1998:335). A theory is a cluster of linked ideas that explain a phenomenon. The purpose of a qualitative research approach is to form new gestalts in order to generate new theories. It is important that the researcher be open to new perceptions (new gestalts) being formed from information received during the research process (Burns & Grove 1998:76). Rizzo Parse, Coyne and Smith (1985:3) (cited by Van der Wal 1999:56) state that qualitative research identifies the characteristics and the significance of human experiences as described by subjects and interpreted by the researcher at various levels of abstraction. In qualitative research, the researcher's interpretations are *intersubjective*; that is, given the researcher's frame of reference, another person can come to similar interpretations. Qualitative data are processed through the researcher's creative abstractions and the subjects' descriptions are studied to uncover the meaning of human experiences (such as labour pain).

Miles and Huberman (1994:4) state that the general reasons for conducting qualitative research are **description** and **hypothesis generation**. **Description** is done when little is known about the phenomenon under study. Little is known about how Mozambican women experience labour pain. **Hypothesis generation** is done when the researcher's qualitative research does not have priori hypothesis. Qualitative inquiry might, however, elicit appropriate hypothesis. The present study did not bring a priori hypotheses, only a guiding question (Van der Wal 1999:56).

3.4.1.4 *Advantages of qualitative research*

Qualitative research has the following advantages:

- Qualitative research is a means of understanding such human emotions as rejection, pain, caring, powerlessness, anger and effort.
- Since human emotions are difficult to quantify (assign a numerical value), qualitative research seems to be a more effective method of investigating emotional responses than quantitative research.
- In addition, qualitative research focuses on understanding the whole, which is consistent with the philosophy of nursing.

- Abstract thinking processes are used to develop research findings from which meaning and theoretical implications emerge.
- The research design is flexible and unique and evolves throughout the research process (Brink & Wood 1998:246; Burns & Grove 1998:35-80).

3.4.1.5 Disadvantages of qualitative research

Qualitative research has the following disadvantages:

- Qualitative research is not easy to conduct.
- A long period, often years, is required to complete a study.
- Techniques used often differ from those of quantitative studies, and the researcher must be rigorous in utilising qualitative research techniques.
- Data collection often involves large amounts of handwritten notes, which must be sorted and organised.
- To generate the findings, the researcher examines all the notes and tabulations and begins to organise them in some way that "makes sense".
- There are no fixed steps that should be followed and the study cannot be exactly replicated (Brink & Wood 1998:246; Burns & Grove 1998:80).

3.4.2 Dimensions of the research design

In this study, the researcher used an exploratory, descriptive and contextual qualitative research design.

3.4.2.1 Exploratory

3.4.2.1.1 Definition

According to *Collins Cobuild English Dictionary for Advanced Learners* (2001:540), **Exploratory** actions are done in order to discover something or to learn the truth about something." Burns and Grove (1998:38) define exploratory research as research conducted to gain new insights, discover new ideas and/or increase knowledge of a phenomenon.

The present phenomenological research method assumes that the "true meaning of phenomena can be explored through the experience as described by the individual" (Jasper 1994:309).

3.4.2.1.2 Purpose for using the exploratory method

In this study, the researcher selected the exploratory method to gain new insights, discover new ideas and/or increase knowledge of labour pain. The researcher therefore entered the research field with curiosity from the point of not knowing (Burns & Grove 1998:28-9; Cresswell 1994:145).

3.4.2.2 Descriptive

3.4.2.2.1 Definition

Descriptive research refers to research studies that have as their main objective the accurate portrayal of the characteristics of persons, situations or groups (Polit & Hungler 1999:643). Roberts and Burke (1989:359) define descriptive research as a non- experimental research design used to observe (and measure) a variable when little conceptual background has been developed on specific aspects of the variables under study. This approach is used to describe variables rather than to test a predicted relationship between variables. In this study, “descriptive” refers to the descriptive aspect of phenomenology described in section 3.5.4.

3.4.2.2.2 Purpose for using the descriptive method

In this study, “descriptive” refers to the experiential meaning of labour pain as lived by the Mozambican women. The descriptive approach was adopted for collecting data; that is, the Mozambican women were asked to describe their experiences of labour pain.

3.4.2.2.3 Advantages of a descriptive approach

A descriptive approach in data collection in qualitative research is able to collect accurate data on and provide a clear picture of the phenomenon under study (Mouton & Marais 1992:43-44). In the present study, the descriptive approach was particularly appropriate because an accurate and authentic description was required of the experience of labour pain by Mozambican women as well as the preferred pain relief.

Streubert and Carpenter (1999:36-44) state that a descriptive method in data collection in qualitative research is central to open, unstructured qualitative research interview investigations. This means that the researcher facilitated the Mozambican women’s description of pain experiences during labour by applying

bracketing and intuiting so that the phenomenon under study could unfold without unnecessary hindrance (see sections 3.5.6.1 and 3.5.6.2).

The researcher bracketed her knowledge and beliefs about pain experiences during labour by retaining a neutral stance on the revelations of the interviews and avoiding personal beliefs from interfering with the informants' descriptions. This means that the researcher held what was already known in suspension, while listening attentively to the informants. It was also necessary to continue with the bracketing process throughout the data collection (Streubert & Carpenter 1999:33).

3.4.2.3 Contextual

In a contextual research strategy, the phenomenon is studied for its intrinsic and immediate contextual significance (Mouton 1996:122). Burns and Grove (1998:749) point out that contextual studies focus on specific events in "naturalistic settings". Naturalistic settings are uncontrolled real-life situations sometimes referred to as field settings. Research done in a natural setting refers to an enquiry done in a setting free from manipulation (Streubert & Carpenter 1999: 331). This means that the study would be done where childbearing normally takes place, namely a hospital. This study is contextual in the sense that the researcher took into account the respondents' ethnic background, physical and cultural values as well as the occurrence of the event in a place where nature took its course without interruption. The study focused on the experience of labour pain by Mozambican woman who had come to deliver their first, second or third babies in the maternity unit of a hospital. In-depth, unstructured open qualitative interviews were conducted with the women within 24 hours after they had delivered their babies. The women were purposively selected according to the sampling criteria in this study. Cultural and transcultural issues were paramount in the present study.

3.4.2.4 Transcultural nursing research

Transcultural nursing is the creative synthesis of scientific and humanistic knowledge from the people's emic perspective and with the best professional etic knowledge to provide meaningful congruent health care practices (Leininger 1997:53). The meanings, patterns and expectations of lived through experiences of people and their life conditions must be considered scientific knowledge (Leininger 1997:54). From the standpoint of nursing science, an understanding of culture helps clarify people's explanations and responses in ways that are personal and meaningful (Ferguson 1997:185).

The present study was done in transcultural nursing because a cultural group that is different from the researcher was studied. Nursing research done from a transcultural nursing perspective therefore focuses

on studying the health/illness beliefs and practices of diverse cultural groups and the integration of these belief systems into the Western medical model.

3.4.3 Epistemology

Epistemology is the branch of philosophy concerned with how individuals determine what is true (Streubert & Carpenter 1999:330). Mouton (1996:28) states that research done in the epistemological dimension is regarded as the pursuit of valid knowledge (truth). Epistemology is the relationship of researchers to reality and the road that they will follow in the search for truth (De Vos 1998:241). This study explored the “truth” about the experience of labour pain. The researcher was committed to “search for truth” in the “epistemic imperative”. A close relationship exists between epistemology, intentionality and ontology. The focus or definition of intentionality forms the basis for epistemology. Intentionality is a way of knowing reality – an epistemology. It carries the meaning of reality (ontology) as we know it. Ontology refers to the nature of reality and human behaviour (De Vos 1998:241). The knowledge process (epistemology) is essentially part of the process of constituting a life-world (ontology) (Van der Wal 1999:77).

Linguistic epistemology refers to the way of knowing reality (truth) through the spoken word (linguistic or lingual); that is, using words to describe an experience. The present study required that Mozambican women in labour describe their experience of labour pain. Linguistic epistemology made the researcher opt for the open unstructured qualitative interview to investigate the lived experiences of these women. This choice was also based on the assumption that what people experience, they experience in terms of language.

3.5 PHENOMENOLOGICAL RESEARCH

In the light of the above, the researcher considered phenomenology the best method and approach in this study.

3.5.1 Definitions

The word “phenomenology” is derived via Late Latin from the Greek *phainomenon*, from *phainesthai* to appear, from *phainein* to show, and means “*Philosophy*. 1. the movement founded by Husserl that concentrates on the detailed description of conscious experience, without recourse to explanation, metaphysical assumptions, and traditional philosophical questions. 2. the science of phenomena as opposed to the science of being” (*Collins English Dictionary* 1991:1168). Thus, phenomenology is an attempt to describe lived experiences without making previous assumptions about the objective reality of

those experiences (Holloway & Wheeler 1996:117). According to Jasper (1994:309), phenomenology considers that the “true meaning of phenomena be explored through the experience of them as described by the individual”. Phenomenology is an inductive, descriptive research method. The task is to investigate and describe all phenomena including human experiences in the way these appear (Omery 1983:49). In the present study, the researcher used exploratory, descriptive and contextual designs (see sections 3.4.2.1, 3.4.2.2 and 3.4.2.3). The goal of phenomenological research is to describe experiences as they are lived; in other words, the “lived experiences”. Phenomenological research further examines the particular experiences of unique individuals in a given situation thus exploring not what is (reality), but what it is perceived to be (Burns & Grove 1998:81).

Van der Wal (1999:58) refers to Rieman (1986:90), who said that the general guiding question in phenomenological research is: What is the essence of this phenomenon as experienced by these people? The guiding questions are: What is the phenomenon that is experienced and lived? How does it show itself? In phenomenology, “experience” refers to human involvement in a situation before the interpretation of the experience. Phenomenology aims to forage through the layers of interpretation to disclose experience as it unfolds relatively naively in people’s initial contact and involvement in a situation (Van der Wal, 1999:63). In this study, the people were the Mozambican women

3.5.2 Advantages of phenomenology

In addition to the general advantages of qualitative research, phenomenology has the following advantages:

- It is a highly appropriate approach to researching human experience (Wimpenny & Gass 2000:1486).
- It tries to uncover concealed meaning in the phenomenon embedded in the words of the narrative (Sorrell & Redmond 1995 cited in Maggs-Rapport 2000:221).
- As a research method, phenomenology is a rigorous, critical, systematic investigation of phenomena (Streubert & Carpenter 1999:48).

3.5.3 Indications for the use of the phenomenological approach

The purpose of phenomenological enquiry is to explicate the structure or essence of the lived experience in the search for the meaning that identifies the essence of the phenomenon, and its accurate description through the everyday lived experience (Streubert & Carpenter 1999:48).

According to Streubert and Carpenter (1999:48), qualitative phenomenology is employed for the purposes of

- clarifying the nature of being human
- expanding awareness about a certain phenomenon
- fostering human responsibility in the construction of realities
- tightening the bond between experiences and the concepts and theories used to explain those experiences

Most nursing researchers adopt the phenomenological approach because of the nursing profession's philosophical beliefs about people. Nursing also grounds its practice in a holistic belief system that cares for mind, body and spirit (Streubert & Carpenter 1999:56).

3.5.4 Dimensions of phenomenology

Van der Wal (1999:64) refers to Lowenberg's (1993) statement that phenomenology refers to one of two approaches. In the first, the researcher captures the lived experience of participants. The second involves the hermeneutical method and the analysis of text to arrive at symbolic meanings. Omery (1983:51) describes Spiegelberg's (1975) six types of phenomenology, namely descriptive phenomenology, phenomenology of essences, constitutive phenomenology, reductive phenomenology, phenomenology of appearances, and hermeneutical phenomenology.

(1) *Descriptive phenomenology*

Spiegelberg (1975) defined descriptive phenomenology as "direct exploration, analysis, and description of particular phenomenon, as free as possible from unexamined presuppositions, aiming at maximum intuitive presentation" (Streubert & Carpenter 1999:49). Descriptive phenomenology stimulates people's perception of lived experiences while emphasising the richness, breadth, and depth of those experiences (Streubert & Carpenter 1999:49). Descriptive phenomenology is a three-step process: (1) intuiting, (2) analysing and (3) describing (Brink & Wood 1998:341) (see sections 3.5.6.1, 3.5.6.2, 3.5.6.3 and 3.5.6.4).

(2) *Phenomenology of essences*

Phenomenology of essences involves probing through the data to search for common themes or essences and establishing patterns of relationships shared by particular phenomena. Probing for essences provides a sense of what is essential and what is accidental in the phenomenological description (Streubert &

Carpenter 1999:52). The researcher followed the steps of intuiting, analysing and describing (Streubert & Carpenter 1999:52).

(3) *Constitutive phenomenology*

Constitutive phenomenology is studying phenomena as they become established or constituted in people's consciousness. According to Spiegelberg (1975), constitutive phenomenology means the process in which the phenomena take shape in people's consciousness as they advance from first impressions to a full picture of their structure (Streubert & Carpenter 1999:53). This involves the researcher's "growth" during the present study.

(4) *Reductive phenomenology*

Reductive phenomenology occurs concurrently throughout a phenomenological investigation. The researcher continually deals with personal biases, assumptions and presuppositions and brackets or sets aside these beliefs to obtain the purest description of the phenomenon under investigation. Reductive phenomenology detaches the phenomenon of our everyday experience from the context of our naive or natural living, while preserving the content as fully and as purely as possible. This step is critical for the preservation of objectivity in the phenomenon (Streubert & Carpenter 1999:53). In this study, the researcher began by identifying presuppositions or assumptions she holds about the experience of labour pain because as a woman she was at some time subjected to the same experience. This process involves a critical self-examination of personal beliefs and an acknowledgement that the researcher has gained experience.

Phenomenological reduction is critical if the researcher is to achieve a pure description of the phenomenon. The reductive process is also the basis for postponing any review of literature until the researcher has analysed the data (Streubert & Carpenter 1999:53).

(5) *Phenomenology of appearances*

Phenomenology of appearances involves paying attention to the ways that phenomenon appear. The researcher pays attention to or watches the phenomenon under study for ways it appears in different perspectives or modes of clarity; that is, determining the distinct from the hazy surrounding it as it unfolds through dwelling with the data (Streubert & Carpenter 1999:53). Phenomenology of appearances does not apply to the present research because the researcher did not observe the phenomenon as it unfolded, but only asked the informants to describe their own experiences of the phenomenon.

(6) *Hermeneutical phenomenology (interpretive)*

Hermeneutical or interpretive phenomenology concentrates on interpreting the concealed meanings in the phenomenon that are not immediately revealed to direct investigation, analysis and description (Omery 1983:15). This approach concentrates on the need to study human consciousness by focussing on the world that the study participants subjectively experience (Maggs-Rapport 2000:220). This could indicate immediate probing during the interviews.

3.5.5 Procedural steps

In this study, the researcher used Streubert's (1991) procedural steps (Streubert & Carpenter (1999:51):

- Explicate a personal description of the phenomenon of interest.
- Bracket the researcher's presuppositions.
- Interview participants in unfamiliar settings. (In this case, the setting was unfamiliar for the informants because it was in a foreign country.)
- Carefully read the interview transcripts to obtain a general sense of the experience.
- Review the transcripts to uncover essences.
- Apprehend essential relationships.
- Develop formalised descriptions of the phenomenon.
- Review the relevant literature (literature control).
- Distribute the findings to the nursing community.

3.5.6 Special strategies in phenomenology

Descriptive phenomenology involves the following four strategies: intuiting, bracketing, analysing and describing.

3.5.6.1 *Intuiting*

"Intuition is a process of thinking through the data so that a true comprehensive or accurate interpretation of what is meant in a particular description is achieved" (Streubert & Carpenter (1999:331). In intuiting, researchers become absorbed in the phenomenon, looking at it afresh, without layering it with what they have bracketed out. Concentration is very important here because the involvement is intense (Brink & Wood 1998:301). Intuiting results in a common understanding about the phenomenon under investigation

(Streubert & Carpenter 1999:46). Through the intuitive process the researcher acquired an understanding of the phenomenon of labour pain as described by the Mozambican women. During the interviews the researcher encouraged knowledge generation by using facilitative techniques such as open-ended clarifying questions, and refrained from leading questions (Streubert & Carpenter 1999:32).

3.5.6.2 Bracketing

Bracketing refers to the process of holding assumptions and presuppositions in suspension to improve the rigour of the research (Holloway & Wheeler 1996:207). This means that researchers explore their own assumptions and preconceptions in order to set them aside or keep them in suspension rather than conceal them so that they do not interfere with the information given by the participants (Holloway & Wheeler 1996:190). The bracketing process is crucial throughout the research process, especially during data analysis. Bracketing requires the researcher to remain neutral with respect to belief or disbelief in the existence of the phenomenon (Streubert & Carpenter 1999:47). The researcher first had to identify any preconceived ideas about Mozambican women in labour (Streubert & Carpenter 1999:32-33). Then the researcher had to suspend any knowledge she might have about the Mozambican experience of labour, to prevent this information from interfering with the recovery of a pure description of the phenomenon (labour pain). This would allow "truth" to show itself and determine the trustworthiness of the results.

3.5.6.3 Analysing

Phenomenological analysing involves identifying the essence of the phenomenon under investigation based on the data obtained and how data are presented. At this point the researcher listens, compares and contrasts descriptions of the phenomenon under study. This allows for identification of recurring themes and interrelationships (Brink & Wood 1998:20). As the researcher listened to the descriptions of the experience of labour and dwelt with the data, common themes or essences began to emerge.

3.5.6.4 Describing

Describing is the final step and the aim is to communicate and describe (in writing and verbally) distinct, critical elements of the phenomenon thereby communicating to others what the researcher has found (Brink & Wood 1998:23).

The researcher must avoid attempting to describe a phenomenon prematurely. Premature description is a common methodological error associated with this type of research (Streubert & Carpenter 1999:52). In

this study, phenomenological describing involved classifying all critical elements or essences common to the lived experience of labour pain and describing these essences in detail.

3.6 POPULATIONS AND SAMPLING

3.6.1 Population

The population is the entire set of individuals (or objects) having some common characteristics as defined by the sampling criteria established for the study (Burns & Grove 1998:206; Polit & Hungler 1999:651). In this study, the population of informants from whom a sample was selected to participate were Mozambican women admitted into the maternity unit in labour and who had already delivered their first, second or third babies, that is, primigravidae, gravida 2 and gravida 3.

3.6.2 Sampling

The sample is a subset of the population selected to participate in a research study. It defines the selected groups of elements, that is, individuals, groups and organisations. The sample is chosen from the study population that is commonly referred to as the "target population or accessible population" (Burns & Grove 1998:206; Polit & Hungler 1999:654). In this study, the sample consisted of Mozambican women in labour, which were primigravidae, gravida 2 or 3 and between the ages of 18 and 35. Gravidity and maternal age are factors that determine a normal outcome of labour. The normal childbearing age falls within the ages mentioned above. Gravidity beyond four (4) is associated with maternal and foetal complications (Mackay 1988:196).

3.6.3 Sample location

The sample was obtained from a population of Mozambican women admitted to the maternity unit in a regional hospital in Swaziland. The sample was obtained according to the sampling criteria (see section 3.6.5).

3.6.4 Sampling method

Convenience and purposive sampling were used in the present study. In convenience sampling, participants are included in the study because they happen to be in the right place at the right time (Burns & Grove 1998:217; Polit & Hungler 1999:305). Purposive sampling refers to judgmental sampling that involves the conscious selection by the researcher of certain participants to include in the study (Burns &

Grove 1998:750). Sampling is the process of selecting the people with whom to conduct research. In qualitative research, individuals are selected to participate based on their firsthand experience of a phenomenon of interest (Streubert & Carpenter 1999:22). Lincoln and Guba (1985:25) define this type of sampling as "purposeful sampling". Although Mozambican women who were in labour were included in the study because they happened to be in the right place at the right time, the researcher consciously selected Mozambican women according to specific selection criteria.

3.6.5 Sampling criteria

Sampling criteria were based on the research problem, purpose, design and practical implications of the research topic. Events, incidents and experience were also regarded as important elements in the sampling criteria of the present study (Brink 1990:14; Burns & Grove 1998:246; Polit & Hungler 1999:132). Access to the respondents was through the researcher's full participation on the maternity ward routine as part of the midwifery staff. The researcher participated in caring for the labouring women from admission in labour through the progress of labour until delivery, as well as the immediate postnatal care of the women. In the researcher's view, this period was sufficient to allow informants to give a clear description of their experiences of labour pain to the researcher through in-depth interviews.

The respondents were asked to participate in the study after they had delivered their babies, in the immediate postnatal period (within 24 hours). A promise of confidentiality and anonymity was confirmed. This was done for the purpose of maintaining privacy during the labouring process. Written consent was solicited from the research respondents so that they participated of their own free will (see section 3.10.1).

3.6.5.1 Inclusion criteria

As indicated, Mozambican women in labour, aged between 18 and 35, with parity 0-3 were selected to participate in the study. The researcher also took into consideration the duration of stay since admission to the hospital. This was 24 hours of hospital stay since admission, which is the normal period of stay for women who have had normal deliveries in this particular study setting.

3.6.5.2 Exclusion criteria

All elderly primigravidae above age 30 and adolescents below 18 and those who had come to deliver their fourth or more babies and all complicated labours were excluded from the sample. The reason for the exclusion is that there is a high likelihood of complications of deliveries or recurrence of previous

complications that may affect the experience of labour pain. The immediate postnatal period would not be normal for the groups mentioned above which would make it difficult for the interviews to be conducted.

3.6.6 Sampling size

The development of a rich and dense description of the experiences of labour pain and the way they respond to this type of pain determined the sample size (Streubert & Carpenter 1999:24). The size of the sample was determined by the principle of saturation that Morse (1994:104) and Streubert and Carpenter (1999:25) describe as the point at which data-collection themes are repeated. In this study, saturation was reached at the point where no new information on the experiences of labour pain and the behaviour exhibited by Mozambican women in response to labour pain was generated. A total of five Mozambican women successfully participated in the present study.

3.7 DATA COLLECTION

Data collection is the precise, systematic gathering of information relevant to the research sub-problems, using methods such as interviews, participant observation, focus group discussions and case histories (Burns & Grove 1998:744).

3.7.1 Interviewing

Interviewing refers to structured or unstructured verbal communication between the researcher and the subject in which information is presented to the researcher (Burns & Grove 1998:747).

3.7.1.1 In-depth interviews

Marshall and Rossman (1995) describe phenomenological interviews as “a specific type of in-depth interviewing grounded in the theoretical tradition of phenomenology” (Wimpenny & Gass 2000:1482). There is a relationship between the philosophical tradition and the method, which distinguishes this interview from other forms. The distinction is clearly in the relationship between researcher and participant where this moves from observational in quantitative research to dialogue in qualitative research, and then to reflective in phenomenological research. Such reflectivity appears to acknowledge that the researcher is an important component in the research process (Wimpenny & Gass 2000:1487). Jasper (1994:311) maintains that “the researcher using a phenomenological approach needs to develop specific research skills to enable him/her to get the ‘lived experiences’ without contaminating the data”. This reference to bracketing presupposes that it is the researcher who is ‘contaminating’ the data. This essential

phenomenological reduction or bracketing is undertaken to suspend belief so that preconceptions are put aside and the 'true' phenomenon or essence is revealed in its 'true' form to the phenomenologist (Crotty 1996:87).

3.7.1.2 Open unstructured interviews

The open unstructured interview is considered the main method of data collection in phenomenological research as it provides a situation where the participants' descriptions can be explored, illuminated and gently probed (Kvale 1996:89). The open unstructured interview in phenomenological studies is intended to be in-depth (Wimpenny & Gass 2000:1488).

Denzin (1978) cited in De Vos (1998:300) describes the aim of unstructured interviewing as "to actively enter the worlds of people and to render those worlds understandable from the standpoint of a theory that is grounded in behaviours, languages, definitions attitudes and feelings of those studied". No questions are deliberately formulated. Instead, they develop spontaneously in the course of the interaction between the interviewer and interviewee (Fontana & Fray 1994:368). According to Hallett (1999:56), this approach reflects the open and accepting style of interviewing that seeks to elicit the genuine views and feelings of respondents. The common ground in phenomenological interviews is that by their nature the interviews put the researcher in the role of the research instrument "through which data are collected" (Sorrell & Raymond 1995:118). In open unstructured interviews, the researcher may use reasonable guidelines to prevent the informants from feeling that they are being "cross-examined" on a topic (Burns & Grove 1998:309).

3.7.1.3 Advantages of interviews

Interviews have the following advantages (Burns & Grove 1998:309; De Vos 1998:301):

- Interviewing is a flexible technique that allows the researcher to explore greater depth of meaning that cannot be obtained with other techniques.
- Interpersonal skills can be used to facilitate co-operation and elicit more information.
- There is a higher response rate to interviews than questionnaires, leading to a complete description of the phenomenon under study.
- Interviews allow collection of data from participants unable or unlikely to complete questionnaires such as those whose reading, writing and ability to express them-selves is marginal.

3.7.1.4 *Disadvantages of interviews*

Interviews have the following disadvantages (Burns & Grove 1998:309; De Vos 1998:301; Holloway & Wheeler 1996:54; Polit & Hungler 1995:279):

- Interviewing needs much more time than questionnaires, and is thus more costly.
- The sample size is usually limited because of cost and time.
- Subject bias is always a threat to the validity/trustworthiness of the findings and inconsistency in data collection from one subject to another.
- The vast amount of data collected makes ordering and interpretation difficult.
- Unstructured interviews need to be conducted by researchers themselves and not by other interviewers.

3.7.2 Preparing for the interview

Preparing for the interview starts from the time the researcher selects the participants according to the sampling criteria. Reviewing literature on the topic is part of the preparation for the interview. In selecting interviewees for qualitative interviews, interviewers should enter the world of the interviewees (Cormack 1997:80; De Vos 1998:301).

3.7.2.1 *Becoming acquainted: the initial relationship*

Initially, interviewers and interviewees are strangers to each other. Interviewees tend to be uncertain, self-conscious and overly critical. Interviewers are intent on projecting themselves in a way that will evoke the least resistance in the interviewee. As first impressions are usually lasting impressions, this phase determines whether a person will agree to an interview or not. Particulars that attest to the interviewer's credentials are vital for reassuring interviewees that they are dealing with a bona fide interviewer (Cormack 1997:81). To ensure a good initial relationship, in this study the researcher took part in the care of the informants during labour and delivery and the first hour of the postnatal period. By the time of requesting participation in the study, good rapport had been created between the informant and the researcher.

Practical aspects of the research should be explained and discussed with the interviewee, such as the use of a tape recorder, the interview venue, and the time that can be devoted to the interview. The interviewer should strive to establish a cordial atmosphere so that interviewees will feel secure and have the confidence to speak freely (De Vos 1998:304). In this study, the researcher first explained that the

interview would be tape-recorded then translated and transcribed verbatim. To ensure a cordial atmosphere, the women were allowed to relax in bed with their babies during the interview.

3.7.3 Conducting the interview

Interviews are usually initiated with a broad or general question. After the interview has begun, the role of the researcher is to encourage the participant to continue talking, using techniques such as nodding the head or making sounds that indicate interest. In some cases, the participant may be encouraged to further elaborate on a particular dimension of the topic of discussion (Burns & Grove 1998:307) by using probes. The interviewer is obliged to follow up cues during an in-depth interview in order to get to the 'true' meaning of a phenomenon (Cormack 1997:79).

3.7.3.1 Role of the interviewer

To get to the core of reality about the phenomenon under study, the interviewer needs to probe.

Probing encourages interviewees to give more information. Probes should be neutral to avoid biasing the participants' responses. Specific probing techniques include the following:

- *Open-ended questions*

Open-ended questions do not need a one- word answer but provide interviewees with ample opportunity to express their feelings (De Vos 1998:311). Open-ended questions allow informants to respond in their own words (Polit & Hungler 1999:334).

- *Tracking*

Interviewers act like a needle tracking the grooves of a record. Interviewers show interest and encourage interviewees to speak by closely following the content and meaning of their verbal and non-verbal conversation (De Vos 1998:312). Interviewers also understand the progress of the conversation.

- *Clarification*

The interviewer asks for clarification from the interviewees; for example, "Can you please tell me more about ...?" The researcher can determine whether questions have been misunderstood and can clarify matters (Polit & Hungler 1999:350).

- *Reflective summary*

The interviewers repeat in their own words, the ideas, opinions and feelings of interviewees correctly (De Vos 1998:311).

3.7.3.2 Role of the interviewee

In this study, the researcher used open unstructured qualitative interviews. This was meant to put informants at ease as they were not initially bombarded with questions, but were asked to talk about issues relating to the study that interested them. The participants were able to reveal relevant information in a natural way and had the opportunity to qualify their answers and to explain in depth the underlying meaning of their responses (Polit & Hungler 1999:252).

3.7.4 The researcher/interviewer as the main data collection instrument

The researcher was the main data collection instrument in this phenomenological research. This means that she played a major role in conducting the interviews without the help of research assistants. As the initiator of the interview, the researcher played an active role in making certain decisions about the progress of the interview. The whole interview was tape-recorded and the researcher abstracted data from the material after the interview was over. In doing so, the researcher analysed the information on the tape and translated the interviewees' responses into meaningful descriptions (Cormack 1997:82; De Vos 1998:301).

3.8 DATA ANALYSIS

Data analysis is a mechanism for reducing and organising data to produce findings that require interpretation by the researcher (Burns & Grove 1998:744).

3.8.1 Qualitative phenomenological data analysis

Qualitative data analysis needs to be conducted with rigour and care (Coffey & Atkinson 1996:189). In phenomenological research, the analysis begins as soon as the first data are collected. They may consist of no more than a single interview. When the researchers get ready to attend to the data, their first task is a conceptual one: the clarification of their own preconceptions of the phenomenon under study. This is "bracketing" and means "suspending as much as possible the researcher's meanings and interpretations and entering into the world of the individual who was interviewed" (Tesch 1992:92). The actual data

analysis occurs when researchers read the entire data set. Phenomenological reading is more than a casual taking note of the content. The researchers immerse themselves in the data, read and reread, and dwell with the data, in order to achieve closeness to them and a sense of the whole. When they are satisfied that the text has become accessible to them, they can delineate all "meaning units" throughout the entire interview transcription and then decide which ones are relevant to the research questions asked then bound the meaning units that contain them (Tesch 1992:91).

Data analysis requires that researchers dwell with or become immersed in the data. Data analysis is done to preserve the uniqueness of each participant's lived experience while permitting an understanding of the phenomenon under investigation. This begins with listening to the participants' descriptions and is followed by reading and rereading the verbatim transcriptions or written responses. As the researcher became immersed in the data, she identified and extracted significant statements. It is critical to identify how statements or central themes emerge and connect to one another if the final description is to be comprehensive and exhaustive (Streubert & Carpenter 1999:60). Computer software was utilised for efficient data storage and retrieval.

3.8.2 Types of qualitative data analysis

3.8.2.1 Thematic analysis

The researcher translated and transcribed the tape-recorded interviews, then read and reread the interviews in their entirety, reflecting on the interviews as a whole. Then, she summarised the interviews, keeping in mind that more than one theme might exist in a set of interviews. Once identified, the themes that appeared to be significant concepts linking substantial portions of the interviews were written down and entered on computer (Morse & Field 1998:115).

3.8.2.2 Content analysis

In this analysis, the researcher read the entire interview and identified several topics in the interview. These topics then became primary categories or category labels. With too many categories, saturation is achieved slowly. Once the categories have ample data, the researcher may select to categorise this data into sub-categories of two or more (Morse & Field 1998:117). A tree diagram develops with types of the main category. When each category is reasonably full and saturation is reached (that is, no new data emerge) then the researcher writes descriptive paragraphs about the categories and looks for relationships between categories. These relationships are concurrence, antecedents, or consequences of an initial category (Morse & Field 1998:117).

3.8.3 The data analysis process

In this study, data analysis was done on computer in four phases.

PHASE 1

The researcher first translated the tape-recorded interviews from Swazi into English. Transcripts of verbatim data in plain text were prepared with no indents. This means that the transcribed interviews were presented as is. The main question posed to all five informants appeared in all the transcripts. Probing was done as the interviews continued to encourage the interviewees to give more information. Pages were numbered starting from the first page. This part of the analysis formed the initial phase of data analysis. The researcher read the contents of each interview to establish possible themes emerging from the interviews and reflected on these themes. However, these themes were kept in mind for use in the following phase. An example of the phases is given below.

PHASE 1, INTERVIEWEE 1, DOCUMENT 1

KEY: R: Researcher
P: Participant

AGE 22 P2-1G3.

R: Would you please explain to me all that happened and everything you felt from the time labour started until the baby was born?

P: *When the labour started, I felt some burning pain in the back and lower abdomen. This pain came at intervals of 10 to 15 minutes. As the labour progressed, the pain became worse. Now there was a piercing pain in my abdomen and the burning pain was now around the waist. The pain was more frequent now with intervals of 5 to 10 minutes. In an hour's time the frequency had increased to 3 to 5 minutes. When the baby was about to come, I felt something pushing downward in my pelvis as if I wanted to go to the toilet. I then called the midwife to come because I could not help but push all the way. The pain was less by now and the urge to push was worse. I pushed hard three times and the baby was born. I felt a terrible pain when the baby's head was born, because it stretched my perineum too hard.*

R: Explain what you did or felt like doing as you felt the pain.

P: *The pain only came during a contraction. During this time, the pain would be terrible and I would respond by being restless in bed, tossing about and assuming every type of position in bed, rubbing on the abdomen, and also clinging to the bed rails, and sometimes getting out of bed and standing beside it, but I was bearing the pain all the way.*

PHASE 2

A new document was created. The pages were numbered starting with the number following the last page of the previous document. Four parallel columns were prepared: Text, Data chunks, Code, Category/Notes.

The whole transcript was inserted into column 1 (text). The contents of the transcribed interviews were copied into column 1. This was repeated according to the number of interview transcripts.

In column 2 (data chunks), the text was numbered according to the data forming specific descriptions of the phenomenon. The researcher later developed sub-categories from these data chunks.

In column 3 (code), the main code was written that would eventually form the main theme in the data.

In column 4 (category/notes), the main theme and categories and sub-categories of the data were formulated. These categories contained the information obtained from all the interviews. Direct quotes and specific numbering from which the quotes were obtained were entered in this fourth category (see table 3.1).

PHASE 2, INTERVIEWEE 1, DOCUMENT 2

Table 3.1: Categorisation of the verbatim transcriptions

TEXT	DATA UNIT	CODE	CATEGORY AND NOTES
Researcher: (1) Please describe your experience of pain during labour from the time it started until the baby was born. Participant: (2) I felt some cramp-like pain on my abdomen and burning pain around the waist. I immediately felt an urge to pass urine...	(2.1) cramp-like and burning pain (2.2) on my abdomen and around the waist (2.3) urge to pass urine	Research question Physiology of labour	Physiology of labour Type of pain: (2.1) cramp-like and burning pain Location (2.2) on my abdomen and around the waist Other signs and symptoms (2.3) urge to pass urine

PHASE 3

A new summary document was created. The titles of all the categories created in phase 2 were listed. The data chunks were transferred from phase 2 to the correct category/heading. Page numbers were entered after each chunk where the chunk could be found in the data supplement (example of phase 3 below).

Categories

Physiology of labour pain

Type of pain

(2.1) cramp-like and burning pain

Location

(2.2) on my abdomen and around the waist...

PHASE 4

The categories were arranged in a narrative follow-up. Categories were copied and transferred to the data presentation chapter and the contents discussed with reference to the literature and stated objectives for the study (see chapter 4).

3.9 ADEQUACY AND TRUSTWORTHINESS

Streubert and Carpenter (1999:333) describe trustworthiness as “establishing validity and reliability of qualitative research”. Qualitative research is trustworthy when it accurately represents the experience of the study participants. Trustworthiness of data in method triangulation is demonstrated through the researchers’ attention to and confirmation of information discovery. This is referred to as rigour. The goal of rigour in qualitative research is to accurately represent the study participants’ experiences (Streubert & Carpenter 1999:28).

Data adequacy refers to the amount of data obtained and whether or not saturation occurred. Confirming the results of the study with a secondary sample can ensure adequacy of the data (Morse & Field 1998:156).

Four criteria used to measure trustworthiness of data, namely credibility, dependability, transferability and confirmability.

3.9.1 Credibility

Credibility is demonstrated when participants recognise the reported research findings as their own experiences (Streubert & Carpenter 1999:330). Activities increasing the probability that credible findings will be produced are prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, referential adequacy and member checking (Lincoln & Guba 1985:290-330).

3.9.1.1 *Prolonged engagement*

Prolonged engagement is the investment of sufficient time to achieve certain purposes: learning the “culture”, testing for misinformation introduced by distortions either of the self or of the respondents, and building trust (Lincoln & Guba 1985:302). It is imperative therefore that the researcher spend enough time becoming oriented to the situation. Prolonged engagement also requires that the investigator be involved with a site sufficiently long to detect and take account of distortions that might otherwise creep into the data. The investigator must first deal with personal distortions. The mere fact of being “a stranger in a strange land” draws undue attention to the inquirer, with its attendant overreaction (Lincoln & Guba 1985:302; Streubert & Carpenter 1999:29). In this study, the researcher did spend sufficient time in the site (a period of six months), which enabled her to become oriented to the situation.

3.9.1.2 *Persistent observation*

The purpose of persistent observation is to identify those characteristics and elements in the situation that are most relevant to the problem or issue being pursued and focus on them in detail. Focusing on the issues also implies sorting out irrelevancies – the things that do not count (Lincoln & Guba 1985:304). To satisfy this criterion of trustworthiness, the researcher tentatively identified the informants' behaviour during labour. The presence of the researcher in the situation enabled her to observe the occurrence of the phenomenon and the interaction of the client and caregiver. This enabled her to sort out irrelevancies.

3.9.1.3 *Triangulation*

The technique of triangulation is the third mode of improving the probability that findings and interpretations will be found credible.

Lincoln & Guba (1985:305) refer to Denzin's (1978) four different modes of triangulation: the use of multiple and different *sources, methods, investigators* and *theories*.

3.9.1.3.1 *Sources*

"Sources" is what is most often meant by triangulation. "Multiple sources" may imply *multiple* copies of one type of source (e.g. interview respondents) or *different* sources of the *same* information (Lincoln & Guba 1985:305). In this study, the researcher did not do triangulation, but certification of the information obtained instead (see section 3.9.1.5).

3.9.1.3.2 *Methods*

The concept of triangulation by different methods can imply either different data-collection methods (interviews, questionnaires, observation testing) or different designs (Lincoln & Guba 1985:306). However, this study utilised only one data-collection method, namely the in-depth interview.

3.9.1.3.3 *Investigators*

Although Lincoln and Guba (1985:307) point out that it is possible to use multiple investigators as part of a team with intra-team communication, this study only used one investigator, the researcher, as the data-collection tool.

3.9.1.4 *Peer debriefing*

Peer debriefing is a process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the enquiry that might otherwise remain only implicit in the enquirer's mind. Peer debriefing exposes a researcher to the searching questions of others who are experienced in the methods of enquiry, the phenomenon or both (Lincoln & Guba 1985:308; Polit & Hungler 1999:429). In this study, the researcher exposed the research work to a colleague for constructive criticism.

3.9.1.5 *Member checks*

The member check, whereby data, analytical categories, interpretations and conclusions are tested with members of those stake-holding groups from whom the data were originally collected, is the most crucial technique for establishing credibility. If researchers are to be able to purport that their reconstructions are recognisable to audience members as adequate representations of their own realities, it is essential that they be given the opportunity to react to them (Lincoln & Guba 1985:314; Polit & Hungler 1999:429). The results of the study were shared with some Mozambican women who did not participate in the study because they did not meet the inclusion criteria. The purpose of this exercise was to establish whether the results were realistic to what they know in their culture.

3.9.2 **Dependability**

Dependability is a criterion used to measure trustworthiness in qualitative research. Dependability is met through securing credibility of the findings (Lincoln & Guba 1985:316; Streubert & Carpenter 1999:330). Since there can be no validity without reliability (and thus no credibility without dependability), a demonstration of the former is sufficient to establish the latter.

A more direct technique is the "overlap method", which is simply one way of carrying out the first argument and not a separate approach.

Two more techniques are Guba's "stepwise replication" and "inquiry audit". Stepwise replication is a process that builds on the classic notion of replication as the means of establishing reliability. The inquiry audit is based metaphorically on the fiscal audit. The inquiry auditor examines the *product* (i.e. the data, findings, interpretations, and recommendations) and attests that it is supported by data and is internally coherent so that the "bottom line" may be accepted. This process establishes the *confirmability* of the inquiry. Thus a single audit can be used to determine dependability and confirmability simultaneously

(Lincoln & Guba 1985:332). The supervisor of this study is responsible for examining the data, findings, interpretations and recommendations to attest that it is supported by data. In this study, this activity would be a means of establishing confirmability of the research.

3.9.3 Confirmability

Confirmability is a neutral criterion for measuring the trustworthiness of qualitative research. If a study demonstrates credibility, auditability and fittingness, the study is also said to possess confirmability (Lincoln & Guba 1985:331; Streubert & Carpenter 1999:329). Confirmability is a strategy to ensure neutrality (De Vos 1998:331).

3.9.4 Transferability

Transferability refers to the probability that the study findings have meaning to others, in similar situations. Transferability is also called "fittingness". The potential user, not the researcher, determines whether or not the findings are transferable (Streubert & Carpenter 1999:29). According to De Poy and Gitlin (1993:128), the findings of the natural inquiry are specific to the context only and it is not the desired outcome of this design to generalise from small samples to a larger group of people with similar characteristics. A study can meet the criterion of fittingness if the findings can fit into the context outside the study situation and when the participants view these findings as meaningful and applicable in terms of their own experience (De Vos 1998:349; Guba & Lincoln, 1989:1; Kock 1994:976; Sandelowski 1986:87). Lincoln and Guba (1985:251) are of the opinion that transferability is more the responsibility of the person wanting to transfer findings to another situation of population than of the researcher. The researcher needs to describe the data sufficiently to allow comparison. In the present study, transferability was ensured through the process of member checks. This would enhance the possibility that the findings have the same meaning for other Mozambican women.

In this study, the researcher ensured the trustworthiness of the findings by exposing the study to a colleague for constructive criticism and sharing the findings with Mozambican women who did not participate in the study. Finally, the supervisors were responsible for examining the data, findings, interpretations, and recommendations and attesting that they are supported by the data.

3.10 ETHICAL CONSIDERATIONS

The researcher had a moral obligation to strictly consider the rights of the informants who were expected to provide this knowledge (Streubert & Carpenter 1999:44). The researcher considered it very important to

establish trust between the informants and herself and to respect them as autonomous beings thus enabling them to make sound decisions (Burns & Grove 1998:104; Polit & Hungler 1999:33-38; Streubert & Carpenter 1999:44).

The researcher obtained permission to conduct the study from the relevant authorities and respected the informants' rights to confidentiality, anonymity and privacy and to withdraw from the study at any time.

3.10.1 Permission to conduct the study

The request for permission to conduct the study was forwarded to Raleigh Fitkin Memorial Hospital (see appendix 1). Written permission was also obtained from the management of the study site, the regional hospital (see appendix 2). Written permission was also sought from informants for the interviews (see appendix 3) (Lobiondo-Wood & Haber 1997:31).

3.10.2 Confidentiality and anonymity

Confidentiality protects participants in a study so that their individual identities cannot be linked to the information that they provide and will not be publicly divulged (Lobiondo-Wood & Haber 1997:45; Polit & Hungler 1995:36). Confidentiality means that any information that the informants divulge is not made public or available to others. Anonymity is the protection of the informants in a study so that even the researcher cannot link the subject with the information provided (Lobiondo-Wood & Haber 1997:45; Polit & Hungler 1998:35). Anonymity of a person or an institution is protected by making it impossible to link aspects of data to a specific person or institution. Confidentiality and anonymity were guaranteed by ensuring that the data obtained were used in such a way that no one other than the researcher knew the source (Behi & Nolan 1995:713). This means that the names of the informants were not used to identify the data. According to Polit and Hungler (1999:36), a promise of confidentiality to informants is a guarantee that any information the informants provide will not be publicly reported or made accessible to parties other than those involved in the research.

To ensure confidentiality and anonymity, the informants were only identified numerically.

3.10.3 Privacy

Privacy refers to the right that all information collected in the course of the study will be kept in strictest confidence (Polit & Hungler 1999:35). Privacy means that individuals can behave or think without interference nor may possible private behaviour be used to embarrass or demean them later. In this study,

the researcher ensured that the participants displayed any type of behaviour in response to labour pain without any interference. The researcher only observed these behaviours. The researcher was fully involved in all the activities of the unit as a member of the staff. The participants were made aware of their involvement in the study when they were asked to sign a consent form requesting them to be interviewed after delivery (Polit & Hungler 1999:35).

3.10.4 Right to withdraw

The research participants were given permission to withdraw from participating in the study if they so wished without being prejudiced. Their rights were explained to them (see appendix 4) prior to engagement in the research, before the interview period (Morse & Field 1998:121). Participants must be informed throughout the study about the voluntary nature of participation in research and about the possibility of withdrawing at any stage (Holloway & Wheeler 1996:43). Some of the participants withdrew from the study after seeing the tape-recorder. The reason for the withdrawal was that they feared that the information would be released for broadcast over the air (on radio). They insisted on withdrawing even after the researcher explained that the audiotape was used to facilitate transcription.

3.10.5 Dissemination of results

A copy of the research report will be handed to the health facility where the research was conducted and the information will be published in relevant journals (Catanzaro 1988:479). The participants will be informed of the research results if they so wish. Anonymity is assured because the results do not mention the participants' names.

3.11 CONCLUSION

This chapter described the research design, data collection and analysis, trustworthiness and ethical considerations. Chapter 4 discusses the research findings with reference to the literature review.