Chapter 3

Research methodology

3.1 INTRODUCTION

This chapter describes the research design and methodology, including the population, data collection and analysis. A quantitative descriptive and exploratory research design was used to investigate the knowledge that women attending antenatal clinics have on the transmission of HIV through breast-feeding.

3.2 AIM AND PURPOSE OF THE STUDY

The aim of the study was to propose strategies to promote the reduction of mother-to-child HIV transmission through breast-feeding.

The purpose of the study was to explore the knowledge that women attending antenatal clinics have on HIV transmission through breast-feeding.

3.2.1 Objectives of the study

The objectives of the study were to

- analyse the knowledge that women attending antenatal clinics have on the transmission of HIV through breast-feeding
- describe the factors that influence women attending antenatal clinics on the choice of infant feeding method
- describe the sources of information to women attending antenatal clinics on the transmission of HIV to the infants through breast-feeding

3.3 RESEARCH QUESTIONS

The research questions to achieve objectives were as follows:

- What is the knowledge that women attending antenatal clinics have on the transmission of HIV through breast-feeding?
- What factors influence the choice of women attending antenatal clinics on infant feeding method?
- What are the sources of information to women attending antenatal clinics on HIV transmission to infants through breast-feeding?

3.4 RESEARCH SETTING

The research setting is the environment in which the research study takes place and can be a natural or controlled environment. Natural settings are real-life study environments without any changes made for the purpose of the study (Burns & Grove 2001:40). The study was conducted in Gaborone, Botswana at Gaborone West Block 9 Clinic and Broadhurst III Clinic. These clinics were randomly selected from the 25 clinics that render maternal and child health services in Gaborone. The clinics are homogeneous as they are all City Council clinics in Gaborone and render maternal and child health services.

The study was done in a natural setting, as there was no manipulation of the environment. Thus, no changes were made to the clinic situation or special treatment given to the respondents, which could have affected the results.

The data was collected during the normal clinic day. Therefore, the respondents maintained their position in the queues but were taken aside for the interviews. The two clinics have a reception area, consulting room, examination couches with curtains around them to provide privacy, treatment room, dressing room, injection room, duty room and administrator's office, which was used during the interviews with the respondents to provide privacy. The clinics are open from 7:30 am to 16:00 pm Monday to Friday for antenatal care.

The two clinics selected, Gaborone West/Block 9 and Broadhurst III Clinics provide various outpatient services to nearby communities. Between the two communities, there is an estimated catchment area population of 18 951 and 15 591 people, respectively, of whom at least half are women of child-bearing age (Central Statistics 2001:1). The two clinics provide pre- and post-test counselling and HIV testing. In 2004, Gaborone West/Block 9 Clinic pre-test counselled 986 women and 912 tested for HIV, out of these 241 (26.4%) tested HIV positive, 671 (73.6%) were HIV negative (Gaborone West/Block 9 Annual Clinic Report 2004:2-3). Broadhurst III Clinic pre-test counselled 621 women, of whom 133 (36.2%) tested HIV positive and 234 (63.8%) tested HIV negative. These figures show that the HIV prevalence rate among the antenatal clients attending the two clinics range from 24.6% to 36.2%, indicating a high HIV prevalence among pregnant women.

3.5 RESEARCH DESIGN

A quantitative descriptive and exploratory research design was used to investigate the knowledge that pregnant women attending antenatal clincis have of HIV transmission through breast-feeding.

3.5.1 Quantitative research design

Quantitative research is “a systematic process of obtaining formal objective data to describe the variables and their relationships. Quantitative research uses structured tools to generate numerical data and uses statistics to interpret, organize and represent the collected data” (Burns & Grove 2001:30). In this study, the research design was quantitative as the researcher used a structured interview schedule to collect data from the respondents. This method allowed the researcher to ask all the respondents the same questions with predetermined responses, which allowed objective data to be collected though out the study. The researcher also used frequency tables and graphs to analyse and interpret the findings.

3.5.2 Descriptive research design

A descriptive study “observes and describes the presence, frequency or absence of characteristics of a phenomenon as it naturally occurs, in order to gain additional information. The primary purpose of a descriptive study is to describe the situation, preferences, practices, opinions, concerns or interests of the phenomenon of interest” (Burns & Grove 2001:248; Polit & Beck 2006:189). Descriptive studies provide valuable base line information. The method is also flexible and can be used to collect information from a large group of respondents (Drummond 1998:31). In this study, structured interviews were conducted to elicit information on the knowledge antenatal women have of the transmission of HIV through breast-feeding.

3.5.3 Exploratory research design

Exploratory research aims at investigating the full nature of a phenomenon, the manner of existence, other related factors and the characteristics of the subjects thereof, in order to gain additional information on the situation or practice. Exploratory research is done to increase the researchers’ knowledge on the field of study and provides valuable base line information for further investigation. The method uses interviews and observational methods to collect data (Drummond 1998:31; Polit & Beck 2006:21). The research design was exploratory as it examined the existing knowledge of pregnant women attending antenatal clinics on transmission of HIV through breast-feeding and other factors related to the phenomenon, such as factors that influence choice of infant feeding method and sources of information.

3.6 POPULATION AND SAMPLING METHOD

According to Polit and Beck (2006:258), a population is “the total number of people or elements that fit the specific set specifications of the study. This is also known as the target population. The criteria for inclusion or exclusion should be clearly stated.” In this study, the target population was pregnant women attending antenatal clinic at Gaborone West/Block 9 and Broadhurst III clinics in Gaborone, Botswana.

3.6.1 Inclusion criteria

Inclusion criteria are “the characteristics that the respondents must have in order to be included in the study” (Burns & Grove 2001:367). The respondents included in this study were all pregnant women attending the two antenatal clinics and willing to be interviewed by the researcher.

3.6.2 Exclusion criteria

Exclusion criteria are “the characteristics that the respondents lack in order not to be included in the study” (Burns & Grove 2001:367). In this study the respondents not willing to participate in the study, pregnant women younger than 18 years of age, and mentally ill or mentally retarded pregnant women attending antenatal clinic with no guardian to give informed consent were excluded from the study.

3.7 SAMPLING

Sampling is a process of selecting a portion of the population to represent the total population and the findings from the sample represent the rest of the group. The advantage of selecting a sample is that it is less costly and time saving than collecting information from a large group of respondents. The selected sample should therefore, have similar characteristics to the population under study to allow generalizability of the results to represent the population (Burns & Grove 2001:365; Polit & Beck 2006:259). These are two types of sampling, namely probability and non-probability sampling (Burns & Grove 2001:374, Polit & Beck 2006:260). In this study both probability and non-probability sampling was used. The sites were sampled using probability sampling and the respondents were selected using non-probability sampling.

- ***Probability sampling***

Probability sampling technique is a process of selecting respondents into the study that ensures that every member or element of the population has an equal chance of being

selected into the study, prevents subjectivity, bias, and allows the results to be generalized to the target population. The probability sampling method does not allow the researcher to intentionally exclude a certain portion of the population. To achieve this probability the sample should be selected randomly (Burns & Grove 2001:297). Probability sampling was used to select the two sites (see 3.7.1).

- ***Non-probability sampling***

Non-probability sampling is a process of selecting respondents into the study with less chances of obtaining a representative sample (Burns & Grove 2001:301). Non-probability sampling, by using the convenience sampling technique, was used to select the respondents into the study.

3.7.1 Sampling of sites

Gaborone was conveniently chosen by the researcher due to proximity and being a capital city with the highest population in the country. The two clinics, however, were randomly selected from the 25 health facilities by writing the names of all the health facilities on pieces of paper, putting them in a container and picking the two clinics by drawing two names out. These clinics represent the health services set up in Botswana and Gaborone in particular.

3.7.2 Sampling of respondents

3.7.2.1 Convenience sampling

Convenience sampling was used to select the respondents in the study. Women who joined the queue after the calculation of a sample from the sampling frame were not included in the study. Sixty respondents were interviewed in the two clinics (30 respondents from each clinic) in October and November 2005 on twelve successive days. The researcher interviewed five respondents each day from among the women waiting to be seen. The researcher explained the purpose of the study, their rights and that

participation was voluntary. The respondents then signed a written consent form. According to Polit and Beck (2006: 262) as well as Burns and Grove (2001:375), convenience sampling uses readily available respondents in a study; for example, patients waiting to be seen in a clinic. This sampling method should be used with caution as the respondents may be atypical and introduce bias into the study. To prevent bias, only respondents who met the inclusion criteria were selected. The respondents who joined the queue after the sampling frame was determined, were not include in the study.

3.7.3 Sample size

Burns and Grove (2001:377) state that there are no hard or fast rules about the sample size but a sample should have at least 30 respondents. According to Polit and Beck (2006:267-268), quantitative research designs require large samples to increase representativeness and reduce sampling error. Because of the limited scope of this study a sample of 60 respondents was used. The women attending antenatal clinic in these two clinics were a heterogeneous group as they came from different ethnic, socio-economic backgrounds and cultural norms and beliefs.

3.8 DATA COLLECTION

Data collection is a systematic process in which the researcher collects relevant information to achieve the research purpose and objectives. The instrument used to collect the data depends on the research design (Burns & Grove 2001:460-461). In this study, data was collected using a structured interview schedule administered by the researcher. An interview provides quality data about what people are doing or thinking about a phenomenon (Polit & Beck 2006:241).

3.8.1 Data-collection instrument

A structured interview schedule was designed after the literature review and with the help of the two supervisors and a statistician. In the interview schedule, the researcher asked open-ended and closed questions to find out what people knew and thought about the phenomenon under study.

The interview schedule allows objective data collection from the respondents and eliminates diversion from the topic. It prevents bias or subjective judgments from the researcher. In addition, all the respondents are asked the same questions, which allows objective comparison of results (Brink 1996:153, 158).

The researcher designed the interview schedule that was free from bias and used the same structured questions for all the respondents to ensure consistency of responses. Questions were asked to elicit the knowledge of respondents on HIV transmission through breast-feeding, factors that influence choice of infant feeding method, and sources of information. The interview schedule was divided into four sections: Part A required demographic information; Part B, knowledge of mothers on HIV and breast-feeding; Part C, factors that influence choice of infant feeding method, and Part D, sources of information (see annexure D).

3.8.2 Conducting the interviews

A structured interview is “a method in which information is collected through personal interaction with the respondents to give their views” (Brink 1996:153, 158). In this study, the researcher visited the selected research sites, interviewed the selected sample, using the structured interview schedule, and documented the respondents’ responses in the same order and manner. This method allowed the respondents to clarify questions, where necessary. When deciding on an interview schedule the researcher took into account the following advantages and disadvantages of the interview schedule.

3.8.2.1 Advantages of structured interviews

Interviews have the following advantages:

- Interviews are more feasible for most people; uneducated or illiterate can all answer questions from an interviewer. Thus, responses can also be obtained from individuals who cannot read or write.

- The response rate for interviews is usually high as respondents are less likely to refuse to be interviewed if someone is available.
- An interview is a flexible method, which allows the researcher to explore the deeper meanings of phenomena.
- Face-to-face interviews also produce information through personal observations of the respondents' verbal and non-verbal communication.
- The researcher can clarify ambiguous or confusing questions.
- The respondents are less likely to leave a question unanswered.
- The researcher controls the structured interview (Burns & Grove 2001:420, 422; Polit & Beck 2006:291, 296).

3.8.2.2 Disadvantages

Interviews have the following disadvantages:

- Interviews are time consuming and costly, as the researcher has to travel to the respondents' venue and conduct the interview.
- The respondents may give the information that they think the researcher wants (Burns & Grove 2001:4225; Polit & Beck 2006:296).
- The structured interview schedule with predetermined responses could make respondents give the information that the researcher wants, thus the respondents' give responses as specified by the researcher not their own ideas. This constraint could be overcome by allowing the respondents to state any other response apart from the stated responses in the interview schedule.

3.8.3 Pre-testing of instrument

A pre-test or pilot study is a small-scale trial of the data-collection instrument to determine clarity of questions and whether the instrument elicits the desired information (Polit & Beck 2006:296). In order to ensure reliability and validity the interview schedule was pre-tested on five pregnant women attending antenatal clinics (with similar attributes) at Gaborone West/Block 9 Clinic to check the clarity of questions and identify vague or non-acceptable

questions. Adjustments were made based on the outcome of the pre-test results. The data collected during the pre-test was not part of the study.

3.9 VALIDITY AND RELIABILITY

Reliability is the degree of consistency with which the data-collection instrument produces the same results every time it is implemented in the same situation or used by different investigators. The data-collection instrument should be accurate and stable to reflect true scores of the attributes under investigation and minimize error (Brink 1996:171; Burns & Grove 2001:396, 399, Polit & Beck 2006:324, 328). To ensure reliability, the researcher pre-tested the interview schedule on pregnant women attending antenatal clinics with the same attributes attending Gaborone West/Block 9 Clinic who were not part of the sample. This was done to identify vague, unacceptable questions and consistency of results.

3.9.1 Validity

Validity is the extent of accuracy of an instrument to measure the construct it is supposed to measure in the context of the concepts/variables being studied (Brink 1996:167; Polit & Beck 2006:329). A structured interview schedule was developed after a review of relevant literature to incorporate and measure important variables in the study. The researcher and supervisors closely examined the questions in the interview schedule to ensure that they measured the desired variables. The face, content, and construct validity were also examined.

Face validity

Face validity refers to subjective judgment on whether the research instrument appears to measure what it is supposed to measure (Burns & Grove 2001:400). Face validity was maintained by constructing questions relevant to the study and the interview schedule was evaluated by two nurse educators, two midwives**,** two supervisors and a statistician to check the appearance, consistency and whether the tool measured what it was supposed to measure. Changes were made according to the feedback from the statistician, the

supervisors, nurse educators, research unit officer and midwives who reviewed the interview schedule.

Construct validity

Construct validity ensures that abstract concepts are measured adequately and logically, and relationships between variables are identified with the instrument based on theory, and clear operational definitions. Construct validity includes the definition of variables in line with existing literature or theory and differentiates between respondents who possess the trait and those without the trait (Burns & Grove 2001:232). In this study the interview schedule was based on the literature reviewed and the relevance to the variables in the study. The variables were operationally defined to create a common understanding between the researcher and readers.

Content validity

Content validity is the evaluation of the tool to ensure that all the components of the variables to be measured in a study are included in the interview schedule without neglect of important components (Brink 1996:168). To meet this criterion, the researcher reviewed relevant literature before developing the instrument and ensured that all the parts/necessary variables were included. The instrument was also given to two fellow nurse educators, the two supervisors, statistician and two midwives for comment. The questionnaire was then altered according to their evaluation.

3.9.2 Threats to internal and external validity

3.9.2.1 Internal validity

Internal validity is the extent to which the results of the study reflect reality rather than extraneous variables. Threats to internal validity are factors that may give false positive or false negative in the measurement of variables. Lack of internal validity may be observed when other variables rather than the independent variables under study are responsible for part of or the entire observed outcome on the dependent variable. Therefore, the

researcher has to be observant of other variables rather than the dependent variables that may affect the outcome of the results (Burns & Grove 2001:232). The researcher was observant of the following factors, which could give false or negative measurement of the variables in the study.

Setting

The study was conducted in a natural environment, i.e. clinics, as it wanted to explore the knowledge of pregnant women on the phenomenon of interest and could not alter the results of the study.

History

History is the events or factors occurring at the same time that the study is being done (Burns & Grove 2001:233-234). The researcher paid particular attention to HIV activities and programmes that could affect the results of the study; for example, clients registered on PMTCT and Harvard programmes might have more information on HIV transmission through breast-feeding than those not enrolled on these programmes. The PMTCT and Harvard programmes might influence the knowledge that pregnant women attending antenatal clinics have on the phenomenon of interest as women enrolled in these programmes are given relevant information to make informed decisions on joining the programme. Participation in these programmes was noted on the interview schedule and taken into account in data analysis.

Pre-testing

Burns and Grove (2001:228) state that information obtained on pretest may improve the responses of respondents. In the study, respondents were interviewed on separate dates, individually and in privacy to avoid other respondents over hearing and information gained from the pretest was not disclosed.

3.9.2.2 External validity

External validity deals with the ability to generalize the findings of the study to other members of the population rather than the sample (Burns & Grove 1999:234). The study has limited generalizability due to the sampling approach of respondents and a small sample size. However, the use of two sites improves the possibility of the study to be generalized.

3.10 ETHICAL CONSIDERATIONS

To ensure the ethical conduct of the study, the researcher observed the following principles:

3.10.1 Permission to conduct the study

The researcher sought and obtained permission to conduct the study from the Research and Ethics Committee of the Department of Health Studies, Unisa, Ministry of Health Research Unit in Botswana, City Council Clinic Administrators, and the Clinic Supervisors (see annexures A and B). After obtaining permission, the researcher informed the respondents of the purpose of the study, promised them confidentiality, anonymity and privacy and informed them that participation was voluntary and that they could withdraw from the study at any time should they so wish without penalty. The respondents were asked to sign a written consent form to indicate their willingness to participate in the study (see annexure C). This consent form was kept separate from the interview schedule so that it could not be used to identify the respondents.

3.10.2 Protection of human rights

Human rights are claims and demands that must be met by individuals or groups in order to maintain the respect of individuals and treat them with dignity. The human rights and principles that need to be respected in the conduct of research are beneficence, respect and justice (Burns & Grove 2001:196).

3.10.3 Beneficence

The principle of beneficence (do good and do no harm) ensures that research respondents are not exposed to permanent or undue harm and exploitation (Burns & Grove 2001:203).

Therefore, the researcher should communicate the benefits and risks of the study to respondents and weigh the benefits over the risks of the study. The study should only continue if the benefits outweigh the risks. The researcher should also avoid misuse of the relationship with respondents, exposing subjects to undue harm through asking intrusive and sensitive questions; not use the information gained against respondents. The researcher should discontinue research if injury or disability is suspected (Polit & Beck 2006:88). In this study, the researcher constructed the questions carefully to avoid intrusion of respondents' privacy, explained the purpose and benefits of the study to the respondents and provided the respondents with contact numbers to allow contact in case the respondents had any questions after the interview. The respondents were also allowed to discontinue participation in the study if they felt uncomfortable with the questions or did not wish to continue without any penalty or withdrawal of health care provision to themselves or family members.

3.10.4 Respect

The right to self-determination is based on the principle of respect for individuals and their ability to control their own destiny. Respondents have a right to determine participation in the study without deceit or coercion. The respondents also have a right to full disclosure of information (Polit & Beck 2006:89). In this study, the researcher interviewed respondents privately and treated them with respect and dignity.

3.10.5 The right to informed consent

The respondents were fully informed and explained about the nature and purpose of the study and were free to choose to participate or not to participate without coercion or deceit (Burns & Grove 2001:206; Polit & Beck 2006:89). Each respondent signed a written informed consent form to voluntarily participate in the study and share information with the

researcher. Respondents younger than 18 years of age, mentally ill or mentally retarded were interviewed after obtaining consent from significant members of the family (guardians). The respondents were also informed that data would be reported in a dissertation that will be available in the library of the University of South Africa.

3.10.6 Privacy and confidentiality

Privacy and confidentiality is based on the principle of respect. Privacy is the right of an individual to determine the circumstances, time, and extent, type of information to share or withhold from others (Burns & Grove 2001:200; Polit & Beck 2006: 91). In this study, the respondents' privacy was maintained by conducting individualized interviews and omission of personal details in the interview schedule and not being forced to answer questions. The interviews were conducted in the consulting room or administrator's office; whichever was vacant and provided by the clinic staff. In addition, the respondents' names were not written on the interview schedule to maintain anonymity and the written consent form was kept separate from the interview schedule and not used to identify the respondents. The interview schedules were assigned numerical numbers and data reporting done in aggregate form. In addition, the two sites were recorded as (1) for Gaborone West/Block 9 Clinic and (2) Broadhurst III Clinic. The interview schedule and completed interview schedules were kept in a safe place to which only the researcher had access.

3.10.7 Right to fair treatment

The right to fair treatment is based on the principle of justice, which states that people should be treated fairly, and receive what they deserve (Burns & Grove 2001:202; Polit & Beck 2006:90). This principle was maintained by selecting available respondents and not based on racial, social or cultural biases. The researcher also had high regard for any harm or discomfort experienced by the respondents.

3.10.8 Benefits

The respondents were informed that no immediate benefits in terms of money or any other rewards would be associated with participation in the study. Future benefits were that

those antenatal women not aware of the risks of HIV transmission through breast-feeding would be educated about this in the clinics thereby reducing MTCT of HIV and the research findings could provide information on improvement of health services or care.

3.11 DATA ANALYSIS

The data was analysed using SPSS version V13.0 software computer program by a statistician at Unisa Computer Department. Descriptive and inferential statistics, such as frequency tables, percentages and correlation tests, were used in the data analysis and summaries. Simple tests of associations were also used to identify relationships between variables, including frequencies, Chi square to compare means, t-test, Spearman's rho correlation test and analysis of variance (ANOVA) to compare relationships between variables:

3.11.1 Chi square test (X^2)

The Chi square test (X^2) examines the relationships between two variables at nominal and discrete level in qualitative or quantitative research. The test compares the actual frequencies with the expected outcomes or how closely they match or differ from the expected distribution and whether two variables are independent or not. In this study, most of the questions were 'yes' or 'no' (nominal) and discrete hence the use of this test and frequency tables in interpretation of data (Burns & Grove 2001:454; Munro 1997:100-102, 122-130, 149-153, 238). Carver and Nash (2005:239) state that Chi square test (X^2) test is used to test statistical relationships between two discrete variables using a set of frequencies. Therefore, the Chi Square tests (X^2) were performed using SPSS using commands: Analyze$\rightarrow$ Nonparametric tests $\rightarrow$ Chi square test (X^2); while for the relationships, the commands were analyze,$\rightarrow$ descriptive statistics $\rightarrow$ cross tabs. A Chi square test (X^2) was done on item 24 (exclusive breast-feeding) and family members expectation, score on knowledge of transmission of HIV and educational level, age, and marital status. It is represented as (Chi= 5.400; P = 0.001).

3.11.2 T-test

A t-test is a statistical examination of samples to compare the difference of means between two groups of variables with the known standard. In t-test the means of a sample is compared with the standard deviation mean. The calculation of a t-test needs average of sample (means), population average/mean, standard deviation of sample and number of observations and should only be used once to test the hypothesis. However, Bonferoni t-test can be used several times to test a variety of relationships between variables. The bigger the difference between means, the higher the significance (Burns & Grove 2001:581; Munro 1997:134). The computer program calculates the t-test with a p value, which indicates the probability of occurrence. The computer programme calculated the t test with a p value, which indicates the probability of occurrence and can be presented as: (t = 34.7, t = 31.85; p = 0.0005) with a difference of means of 73.8 and 56.7.

3.11.3 Spearman's rho correlation test

Correlations are measures of relationships between variables, while a correlation index indicates the extent of relationship between two sets of data. Spearman's rho correlation test (r) is suitable in studies where there is ranked or ordinal data. A higher value close to 1 or –1 shows a strong relationship while a value closer to zero shows a weak relationship (Hinkle, Wiersma & Jurs 1998:106-107). Spearman's rho correlation coefficient (r) is used to examine existence of relationships between two variables. The result of a spearman rho correlation coefficient analysis are indicated by score of r = 0; +1 or r = – 1 linear relationship between variables. In a result of r = 0 indicates no relationship, r = +1, indicates a positive linear relationship that is an increase in one variable is associated with an increases in the other variable, or decrease of a score in one variable is associated with a decrease in the other variable. An r = –1 correlation indicates that as one variable values increases the other value decreases (Burns & Grove 2001:528; Munro 1997: 224-225). In this study, the Spearman rho correlation test was done to find the strength of relationships within the ordinal data. The test was done on demographic data and knowledge on transmission of HIV through breast-feeding, item 4 (marital status) and item 10 (understanding of complementary feeding) and understanding of exclusive breast-feeding

(item 10) and found significant results. These tests were performed using the commands: analyze → correlate→ bivariate → spearman rho and is presented as (r = - 0.276; p=0.05).

3.11.4 ANOVA test

Analysis of Variance test (ANOVA) test examines relationships between two or more variables at once rather than conducting a series of t-tests, which increases the risk of Type 1 error (Munro 1997:162). In this study, one-way ANOVA was used to compare means of different groups while maintaining the type 1 error at alpha level of 0.05 for the entire set of comparisons. ANOVA test identifies the effect of independent variable from the variation due to error. The test was done to identify relationship between variables level of education, marital status and religion with knowledge score on transmission of HIV through breast-feeding; enrolment in PMTCT programme with level of knowledge on transmission of HIV through breast-feeding. The findings are presented as (F = 0.02, R = 0.8843; p = 0.000368).

3.11.5 Knowledge score

A model answer was presented to the statistician for items 8 to 12 which were measuring knowledge of antenatal women on transmission of HIV. The statistician then awarded 1 mark for the correct response and a 0 for a wrong response for a group of questions. The sum of the respondent's correct marks was expressed as a percentage. This score was then compared and correlated with various biographic information of respondents to determine what influenced the specific knowledge of respondents e.g. Level of education, marital status, religion, and enrolment in PMTCT programme.

3.12 CONCLUSION

This chapter discussed the research design and methodology used in the study. A quantitative, descriptive, exploratory design was used to investigate the research objectives and questions. A structured interview schedule was used to elicit data from antenatal women on the phenomenon of interest. Chapter 4 describes the data analysis and interpretation.