

EXPERIENCES AND PERCEPTIONS OF PREGNANT WOMEN REGARDING HEALTH EDUCATION GIVEN DURING THE ANTENATAL PERIOD

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for the degree of Master of Nursing in the Faculty of Medicine and Health Sciences
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DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof, that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

The availability and provision of good antenatal care services ensure early detection and prompt management of any complication or disease that may adversely affect pregnancy outcome. To ensure high quality care, an ongoing health education and empowerment of pregnant women with pregnancy related information, need to be provided by midwives throughout pregnancy.

The purpose of this study, therefore, was to explore the pregnant women`s experiences and perceptions regarding health education given during the antenatal period.

The objectives set were to

- explore the content of the health education given to pregnant women by midwives during the antenatal period
- determine whether the health education offered by midwives is understood by pregnant women
- determine whether information regarding Health Education during antenatal period is applicable and is used by pregnant women.

A qualitative approach with an explorative descriptive design was applied for the purpose of this study.

The population included pregnant women who attended an antenatal clinic for the second time in 2012. Ten pregnant women were selected purposively who consented to participate in the study.

The trustworthiness of this study was assured by using Lincoln and Guba`s criteria of credibility, transferability, dependability and confirmability. A pretest was done with one participant not included in the actual study.

Ethics approval was obtained from the Ethics Committee of the Faculty of Medicine and Health Sciences at Stellenbosch University, reference: S12/05/136. Informed written consent was obtained from each participant which included a recording of the interview.

Data was collected through semi-structured interviews using an interview guide and a tape recorder. The researcher approached two women per day for five days. A total of ten (10) pregnant women were interviewed until data saturation reached.

The use of Tesch's eight steps of data analysis was used to analyse the transcribed data as described in De Vos et al. (2004:331).

Findings revealed that health education was given to pregnant women at the institution under study but with minimum explanations. The midwives were perceived as supportive and regarded as a source of information and self-care agents. Antenatal attendance was regarded as important by participants. Participants indicated that their unborn babies were monitored by the midwives in order to detect abnormalities early. However, midwives emphasised non-pregnancy related complications specifically HIV/AIDS and neglected to give basic antenatal care, such as antenatal exercises, personal hygiene and diet. Language was found to be a barrier and contributed to a lack of information.

Recommendations include basic antenatal aspects to be covered in the health education, such as emphasis on personal hygiene, exercises, diet and avoidance of harmful sociocultural practices. With the implementation of appropriate teaching principles language, age and involvement of influential people during health education should be considered.

In conclusion, to reduce maternal morbidity and mortality rates and promoting self-care reliance, antenatal care services should be accessible to facilitate ongoing health education by midwives throughout pregnancy.

OPSOMMING

Die beskikbaarheid en voorsiening van goeie voorkeboortesorgdienste verseker die vroeë en vinnige bestuur van enige komplikasie of siekte wat swangerskap-uitkomst nadelig mag beïnvloed. Om hoë gehalte sorg te verseker, moet gesondheidsvoorligting en bemagtiging van swangervroue rakende swangerskap inligting deurlopend deur vroedvroue verskaf word. Die doel van hierdie studie was om vervolgens die swangervrou se ervaringe en persepsies ten opsigte van gesondheidsopvoeding gedurende die voorkeboortelike stadium te ondersoek.

.Die doelwitte soos gestel was om:

- die inhoud van die gesondheidsvoorligting wat deur vroedvroue gedurende die voorkeboorte periode aan swangervroue verskaf word, te ondersoek
- te bepaal of die gesondheidsvoorligting wat verskaf word deur vroedvroue deur swangervroue verstaan word
- vas te stel of die ligting aan swangervroue gepas is en te bepaal of dit toegepas word deur swangervroue.

'n Kwalitatiewe benadering met 'n beskrywende ontwerp is vir die doel van hierdie studie toegepas.

Die populasie het swangervroue ingesluit wat 'n voorkeboortekliniek vir die tweede keer gedurende 2012 besoek het. Tien vrouens is doelgerig geselekteer wat daartoe ingestem het om aan die navorsing deel te neem.

Die betroubaarheid van hierdie studie was verseker deur van Lincoln en Guba se kriteria van geloofwaardigheid, oordraagbaarheid, betroubaarheid en bevestigbaarheid gebruik te maak. 'n Loodsondersoek was met een deelnemer wat nie in die werklike studie ingesluit was nie, gedoen.

Etiese goedkeuring is verkry van die Etiese Komitee van die Fakulteit van Geneeskunde en Gesondheidswetenskappe aan die Universiteit van Stellenbosch, verwysing: S12/05/136. Ingeligte skriftelike toestemming is verkry van elke deelnemer wat ook 'n opname van die onderhoud ingesluit het.

Data is ingesamel deur van semi-gestruktureerde onderhoude gebruik te maak met behulp van 'n onderhoudsgids en 'n bandopnemer.

Die gebruik van Tesch se ag stappe van data-analise is gebruik om die getranskribeerde data te analiseer (De Vos et al., 2004:331).

Bevindinge het getoon dat gesondheidsvoorligting wel aan swangervroue by die inrigting onder die soeklig met die minimum verduidelikings verskaf is. Die vroedvroue is as ondersteunend en as 'n bron van inligting, asook as selfsorgagente waargeneem. Voorgeboorte bywoning is as belangrik deur deelnemers gesien. Deelnemers het aangedui dat hulle ongebore babas gemonitor is deur vroedvroue om abnormaliteite vroeg op te spoor. Nietemin, vroedvroue het nie-verwante swangerskap komplikasies, spesifiek MIV/VIGS beklemtoon en het nagelaat om aandag te gee aan basiese voorgeboortesorg soos voorgeboorte oefeninge, persoonlike higiëne en dieet. Daar is bevind dat taal 'n hindernis is en dat dit bygedra het tot 'n gebrek aan inligting.

Aanbevelings sluit in basiese voorgeboorte aspekte wat gedek moet word in gesondheidsvoorligting, soos die beklemtoning van persoonlike higiëne, oefeninge, dieet en die vermyding van nadelige sosio-kulturele praktyke. Met die implimentering van doeltreffende onderrigbeginsels moet taal, ouderdom en die betrokkenheid van invloedryke mense gedurende gesondheidsvoorligting in ag geneem word.

Ten slotte, om moeder-morbiditeit en-mortaliteitsyfers te verminder en selfsorgvertroue te bevorder, behoort voorgeboortesorgdienste toeganklik te wees, sodat vroedvroue volgehoue gesondheidsvoorligting tydens swangerskap kan fasiliteer.

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

Worldwide since the early part of the twentieth century maternal morbidity and mortality have been a major challenge in obstetrics. Substantiated in the report of the high death rate at the institution under study the cause of mortality was found to be as a result of poor antenatal care (Department of Health, 2007:4). Hogan, Foreman, Naghavi, Ahn, Wang and Makela (2010:1617) describe maternal mortality as death of women during pregnancy, childbirth or in the first 42 days after delivery. According to Baskett (2008: 267), maternal morbidity is defined as morbidity from any cause related to or aggravated by the pregnancy and its management but not from accidental or incidental causes.

The national strategy for maternity care requires mothers to be empowered to contribute actively to improve maternal health (Department of Health, 2007:9). The focus of this study was therefore based on exploring the experiences and perceptions of pregnant women about the health education received during the antenatal period. Health education, could be described as the process by which people learn about their health and more specifically, how to improve their health (Matuza,2004:1).

The researcher through her clinical experience found that pregnant women at the institution under study registered late for antenatal care services or not registering at all. Some reported late as referrals, with avoidable complications from private practitioners, traditional doctors and traditional birth attendants. This happened despite the fact that maternity guidelines, policies and protocols at this institution and the surrounding clinics were in place and clearly defined. These protocols and policies were based on the maternity guidelines, specifically recommendations two (2) and ten (10) that require that all pregnant women be offered with pregnancy related information that include the importance of attending antenatal clinic, dangers and complications of pregnancy that should be reported immediately to the clinic, whereby families and communities at large would be empowered (Department of Health, 2007:7-8 and Pattinson, 2004:10). Thus, active efforts have been recommended to improve the health status of pregnant women through health education and information sharing sessions (Department of Health, 2007: 9).

The World Health Organization (2002:2) also maintains that good quality antenatal services, with health education playing an integral part, should involve the clients in participating, planning, decision-making and improving their own health. Bluff and Holloway (2002:158)

highlighted that the provision of a client-centred service, where women are able to express their opinions, is ideal in improving their health. However, health care providers do not apparently take the views and opinions of pregnant women with regard to what constitutes effective education and empowerment to heart thus there should be no pregnant woman who dies because of a lack of information (Snyman, 2007: IV &7-8). Most of the time inputs of midwives and obstetricians are sought on possible changes in the provision of antenatal care but little or no interest is shown in the views of pregnant women (Mxoli, 2007:84). Consequently, health care providers and clients may perceive quality of care differently. Health care providers may be anxious to ensure technical correctness and punctuality in finishing routine care when dealing with large numbers of pregnant women. The clients on the other hand may be more concerned with and expecting issues like moral support and clearly defined guidelines (Mxoli, 2007:85).

Myths and fatal or detrimental cultural beliefs need to be discussed by health care providers through health education (Mxoli, 2007:83). In this regard the researcher, as a midwife at the institution under study, has background experience of cultural beliefs of pregnant women who hide pregnancy until the last three months of pregnancy (third trimester) for fear of witchcraft. These beliefs need to be addressed by ongoing women's empowerment programmes consisting of health talks, awareness campaigns and involvement of influential people like partners and mothers-in-law, thus improving pregnant women's interaction and compliance (WHO,2002:6). In this regard Stajduhar, Thorne, McGuinness and Kim-Sing (2010:2043) highlighted that cancer sufferers want to do whatever they can to contribute to favourable outcomes. Similarly, pregnant women expect and need to be involved and to examine information sources for reassurance of their credibility. Stajduhar et al. (2010:2043) further emphasise that health care providers should "open the door" to information sharing and communication that will support the patients' expectations and experiences.

1.2 RATIONALE OF THE STUDY

In South Africa, the midwives' independent functions are controlled by the Nursing Act (Act 33 of 2005) and also by the South African Nursing Council regulations R2598 and R2488 as promulgated through the Nursing Act (Nursing Act 50 of 1978). These regulations determine the conduct of registered midwives and the conditions under which they may pursue their profession (Fraser, Margaret, Cooper & Nolte, 2003:5). However, the midwife is the first contact person for most pregnant women attending antenatal clinics in South Africa (Fraser, et al., 2003:5). Consequently, midwives have the primary and fundamental role in improving the pregnant woman's health status (Fraser, et al., 2003:5). They are expected to reinforce and facilitate health education and empower pregnant women with relevant information

throughout pregnancy (Pattinson, 2004:10). The researcher assumes that failure by midwives to offer relevant health education to meet the expectations of pregnant women, may result in late detection of complications and adverse outcomes. This statement is echoed by Mxoli (2007:1) in her study, that the general health status of pregnant women depends largely on the quality of antenatal services available, their empowerment and support they receive. Therefore, the general health of the pregnant woman depends largely on basic antenatal care inclusive of information sharing and empowerment of women as pregnancy tends to aggravate most potential diseases (Snyman, 2007:2). Pregnancy may be natural but that does not mean it is problem free. Women rely on the health service for care and information during this crucial time (WHO, 2005b:41).

De Kock and Van der Walt (2004:4) support health education relating to health promoting activities like exercises, importance of diet, detrimental lifestyle practices, as well as anticipated pregnancy related complications.

In order to ensure high quality care, the effectiveness of health education needs to be evaluated at regular intervals from the pregnant woman's perspective. This will assist in ensuring that the health providers' work is well done (Stajduhar et al., 2010:2043). This statement by these authors is substantiated by the study conducted at Buffalo City Municipality in East London area whereby knowledge of midwives with reference to hypertensive disorders and the management thereof is inadequate which poses a challenge as midwives are responsible for provision of support and quality maternity care throughout the perinatal period (Ngwekazi, 2010:72-74).

Preventable maternal diseases such as the human immunodeficiency virus / acquired immunodeficiency syndrome (HIV/AIDS), hypertensive disorders, obstetric haemorrhages and pregnancy related infections aggravate the problem of maternal mortality (Stoll & Kliegman, 2010:59). These pregnancy related complications need constant and intensive monitoring by skilled health providers at scheduled intervals (Pattinson, 2004:10). Against this scenario and the introduction of the Maternal Free Health Services Policy a woman would have about 12 visits to the clinic during her pregnancy. Pregnant women were routinely screened with urinary tests for proteinuria and infections, and with blood tests for syphilis, haemoglobin measurements and blood-group typing (Villar & Bergsjö, 2003:9).

Due to this high volume of pregnant women at antenatal clinics and the reduced time thus for every woman the WHO model (2005b:1) introduced that pregnant women who are low risk should have a reduced number of four visits, thus decreasing the number of pregnant women attending the antenatal clinic and increasing more time for those that are high risk. This model

facilitated the quality of basic antenatal care (BANC) to be implemented and evaluated at health facilities. The approach within the BANC package separates the first visit from follow-up visits for pregnant women to clearly indicate the activities required for each. The first visit is a very important visit and serves to classify the woman as requiring the basic component of care (BANC) or specialised care in addition to BANC, to classify the woman and to treat and advise accordingly (Pattinson,2007:63).

In 2007 a study was conducted in the Nelson Mandela Metropole to investigate the approach within BANC package in primary health care clinics. It was found that the reduction of antenatal clinic visits to low risk pregnant women decreased the high volumes of pregnant women visiting the clinics. Consequently, this reduction provided midwives with more time to access and screen high risk pregnant women earlier in pregnancy (Pattinson & Snyman, 2007:191-192). Once the reduction in visits was evident in a reduced low risk pregnant women's load, midwives reported it as a positive outcome as they have more time with women, know them better and can spend more time on care and giving health related Information (Snyman, 2007:192).

A maximum of four antenatal clinic visits was recommended for low risk pregnant women. Considering this recommendation, it was imperative that the low risk pregnant women be empowered with information that would help them to be able to identify and report early complications they encountered. There would be therefore, more time for midwives to provide effective and appropriate health education and information to high risk pregnant women (Pattinson & Snyman, 2007:191-192).

The World Health Report 2005 (WHO, 2005b:42) argues that the most important components of care during pregnancy are to provide good antenatal care, avoid or cope with unwanted pregnancies and build societies that support women who are pregnant. Increased coverage of antenatal care in the last decade provides the opportunities for care that should not be missed, namely to promote healthy lifestyles that improve long-term outcomes for women, establish a birth plan and to prepare mothers for parenting.

The promotion of healthy life styles is another antenatal care component that midwives should emphasise when giving health education. Pregnant women should be advised to stop or reduce smoking and alcohol consumption (Sellers, 2003:243). In a study conducted in 2011 in the United States of America it was found that babies born of cigarette smokers were born with lung and heart defects because of delayed development of the lungs and heart (Woolston, 2011:iii). These heart defects include atrial septum and obstruction in the right ventricular outflow tract.

This is echoed by Welch (2011: i), the obstetrician of Providence hospital Michigan, who found that the smoking of cigarettes causes too many complications, in that, babies are born

prematurely or they are born as stillbirths. Cigarettes contain chemicals like cyanide and lead, as well as nicotine and carbon monoxide which are detrimental to the baby's growth and development. Carbon monoxide displaces the oxygen in the fetal blood, thus decreasing the supply of oxygen to the fetus. A shortage of oxygen has an adverse effect on the babies' growth and development which results in premature birth or underweight babies.

Alcohol crosses the placental barrier and destroys the growing organs of the unborn child during the developmental stage (Sellers, 2003:231-232). According to the University of Virginia Health Systems, babies born with drugs and alcohol in their systems go through withdrawals from the drugs and alcohol leading to a condition known as neonatal abstinence syndrome (NAS). NAS is a term to describe a cluster of symptoms a baby may have, such as trembling, excessive crying, seizures, poor feeding, diarrhoea and dehydration (Marchick, 2010:11). Alcohol and substance abuse during pregnancy mostly affect the normal development of the foetal organs (Marchick, 2010:11). In this regard pregnant women need to be empowered about the adverse effects of alcohol and drug abuse and the effect of nicotine on the development of the organs of the unborn baby. The focus has been on decreasing maternal deaths by improving maternity care worldwide hence world leaders from 189 countries met at the United Nations (UN) in September 2000 to set eight (8) Millennium Development Goals (MDGS). Improvement of maternal health was amongst the set goals as described in MDG 4 and 5. The aim was to prevent 33 million unwanted pregnancies, pregnancy and child birth related complications by 2015 (MDG Summit, 2010:A19).

This study, therefore, explored the experiences and the perceptions pregnant women have with regard to health education they receive from midwives concerning their pregnancy at the institution's antenatal clinic under study.

1.3 RESEARCH PROBLEM

As described by Pattinson (2004:10) poor antenatal attendance could be indicative of a lack of health education of pregnant women and could lead to maternal complications and threats to the life of the unborn baby. Lack of education may also lead to an increase in the maternal mortality rate, the use of drugs and alcohol and late detection of complications. For this reason the aim of the study was based on exploring and describing the experiences and perceptions of pregnant women in relation to whether they were receiving adequate health education during the antenatal period.

1.4 SIGNIFICANCE OF THE STUDY

The significance of the study was to determine the experiences and perceptions pregnant women have about health education they received during the antenatal period. The scientific

evidence obtained about the health education given during the antenatal period may guide health care providers, midwives, nursing schools and policy makers about the required interventions to be introduced to promote health education. Ultimately, this may reduce the morbidity and mortality at the institution under study. This institution will hopefully improve deficiencies in maternal care due to primarily, the lack of health education.

1.5 RESEARCH QUESTION

What are the experiences and perceptions of pregnant women regarding the health education given by midwives during the antenatal period?

1.6 RESEARCH AIM

The overall aim of this study was to explore experiences and perceptions of pregnant women regarding health education rendered by midwives during the antenatal period.

1.7 RESEARCH OBJECTIVES

The objectives set for this study were to:

- explore the content of the health education given to pregnant women by midwives during the antenatal period
- determine whether the health education offered by midwives is understood by pregnant women
- determine whether information regarding Health Education during antenatal period is applicable and is used by pregnant women.

1.8 THEORETICAL FRAMEWORK

According to Miles and Huberman (2003:45) a theoretical framework explains either graphically or in the narrative form the main aspects to be studied, the key factors, constructs or variables and the presumed relationship among these aspects. The researcher followed Orem's self-care theory of supportive–educative systems of her general theory of nursing. This theory consists of three related theories which are the self-care theory, self-care deficit theory and nursing systems theory (Burns & Grove, 2005:129). Incorporated within and supportive of these theories are six central concepts, namely:

- self-care: those activities performed independently by an individual to maintain wellbeing throughout
- self-care agency: the individual's ability to perform self-care activities
- therapeutic self-care demand: totality of self-care actions to be performed for some duration in order to meet known self-care requisites
- self-care deficit: nursing is needed and how people can be helped

- nursing agency: the ability in guiding, teaching and directing and
- nursing systems: designed by the nurse which are based on the self-care needs and abilities of the patient to perform self-care activities (Kaur, Behera, Gupta, Verma, 2009:126).

Depending upon the capabilities of the individuals, the nurses' action could be wholly compensatory. The self-care agency is so limited that the patient depends on others for wellbeing, partly compensatory and supportive educative. In this study the 'supportive educative system' is applied but also the partly compensatory theory is considered in view of the fact that pregnant women can meet some in born pregnancy related self-care, which are sometimes dangerous myths, but they need a midwife to help meet other pregnancy related and health educative activities (Cherry & Jacob, 2004:5). In the supportive educative system the person is able to perform or can and should learn to perform required measures of externally or internally oriented therapeutic self-care but cannot do without assistance (Cherry & Jacob, 2004:5 and Burns & Grove, 2005:129). For the purpose of this study the pregnant women who attend an antenatal clinic have a deficit in knowledge about their pregnancy care and adverse outcomes may increase perinatal and maternal mortality rates. Therefore, pregnant women should be empowered with the required knowledge to prevent complications which are referred to the therapeutic self-care demand of Orem's theory. The midwives are required to give health education and information about the do's and don'ts during pregnancy to prevent pregnancy related problems and outcomes. This is referred to the nursing agency and therapeutic self-care of Orem's theory. Pregnant women in the process will be capacitated and empowered to care and be aware of pregnancy related complications and will seek help to prevent adverse outcomes of pregnancy and this is referred to the self-care agency (Cherry & Jacob, 2004:5 and Burns & Grove, 2005:129). According to Orem's supportive educative systems, pregnant women's requirements are, in this regard, confined to decision making, behavioural change and acquisition of knowledge and information. The midwives' role is to promote and guide pregnant women as self-care agents (Kaur et al., 2009:124). The following illustrated theoretical framework (figure 2.1) is based on Orem's self-care model of the theory of supportive-educative systems as applied to this study (Kaur, Behera, Gupta & Verma, 2009:126 and Burns & Grove, 2005:129).



Self-care agent
Pregnant woman

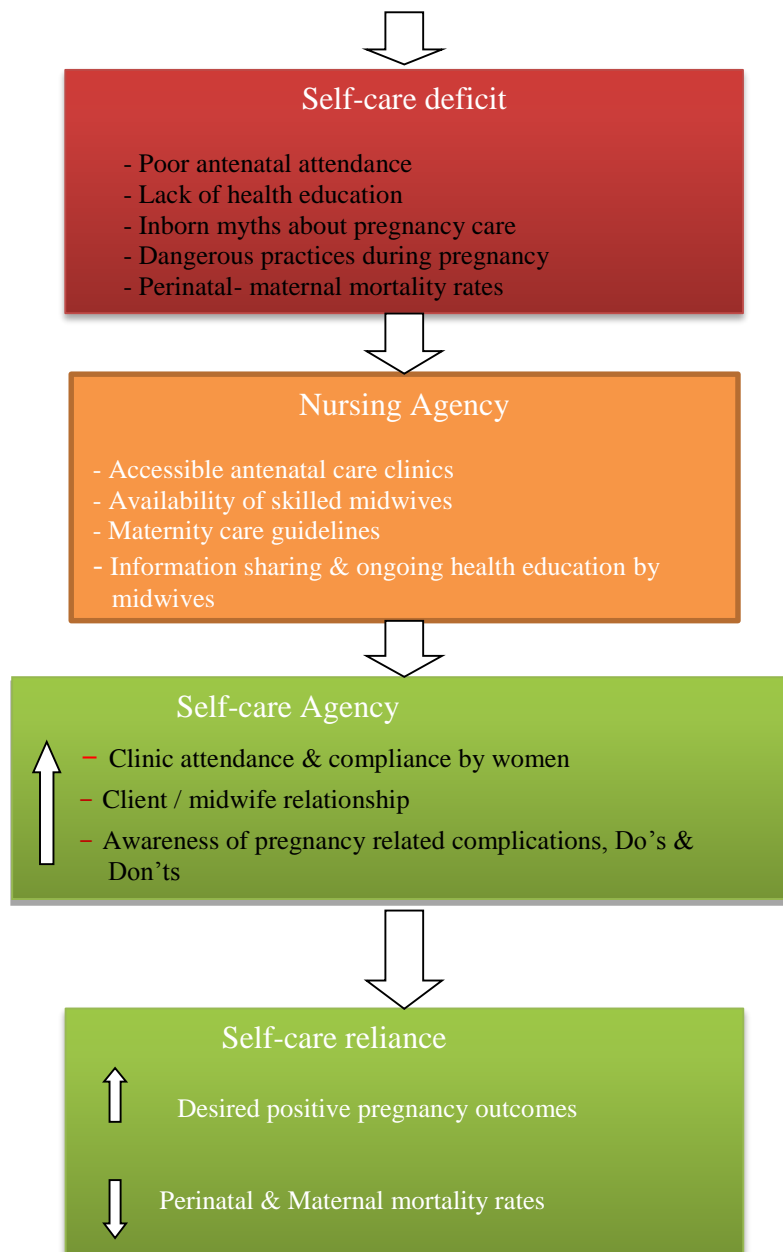


Figure 1.1: Quality of care and outcomes, theoretical framework

Source: Kaur, Behera, Gupta & Verma, 2009:126 and Burns & Grove, 2005:129

1.9 RESEARCH METHODOLOGY

A brief description of the methodology followed in this study is described with a more in-depth description in chapter 3.

Research methodology encompasses the planning, structuring and execution of research with emphasis on the actual research process (Henning, Gravett & Van Rensburg, 2005:101).

1.9.1 Research design

A qualitative approach with an explorative descriptive design was applied to explore the experiences and perceptions of pregnant women with regard to the health education given during the antenatal period. In-depth interviews with pregnant women were conducted using open-ended questions.

1.9.2 Population and sampling

For the purpose of this study, the population was pregnant women who attended an antenatal clinic for the second time irrespective of the number of pregnancies (gravid) and age. Participants were recruited from a hospital in the Eastern Cape, antenatal clinic where antenatal services are rendered daily. Participants were chosen from the clinic register by choosing the first two pregnant women scheduled and available for that day. A sample size of ten (10) pregnant women were selected and interviewed until saturation of data was reached from the total population of 340 women (N=340)

1.9.2.1 Inclusion criteria

Inclusion criteria for this study were all pregnant women who attended the clinic for the second time for antenatal care services in 2012.

1.9.2.2 Exclusion criteria (insertion of bullets)

- Pregnant women who for the first time attended the antenatal clinic.
- Professional nurses, midwives or doctors who were pregnant.
- The pregnant women who were not willing to participate in the study were also excluded in this study.

1.9.3 Data collection tool

Data was collected with the use of an interview guide (Annexure F) in semi structured interviews with individual participants. The tool was designed based on the objectives of the study, supported by the literature and the researcher's clinical experience and under the guidance of the research supervisor.

1.9.4 Pretest / Pilot interview

A Pilot interview as pretest was done with one (1) woman to test the feasibility of the study, including the methodology. The researcher used an interview guide that was to be used in the main study.

1.9.5 Trustworthiness

For the purpose of this study validity of the data was assured by applying the four principles of trustworthiness as described by Lincoln and Guba (1985) in De Vos et al. (2004:331). These principles include transferability, dependability, confirmability and credibility.

1.9.6 Data collection

Interviews were conducted at the institution's antenatal clinic seminar room using a digital tape recorder. This seminar room was private and seldom used by the staff. The researcher approached two women per day for five days. A total of ten (10) pregnant women were interviewed until data saturation reached.

1.9.7 Data analysis

The transcribed data was analysed using Tesch's eight steps of data analysis as described in De Vos et al. (2004:331).

1.10 ETHICAL CONSIDERATION

Ethics approval for this study was requested from the Ethics Committee for Human Research at Stellenbosch University. Written permission from the Superintendent of the institution and Ethics Committee of East London Hospital Complex was obtained. A full explanation of the purpose of the study was given to the pregnant woman before she signed the informed consent. Confidentiality of authorship of statements by participants was assured throughout. Forrester (2010:111) reports that qualitative researchers tend to have more personal contact with their participants hence consent-giving should be seen not as a single action but as an ongoing process of negotiation. Consequently, preceding each interview an explanation of the study was given and written consent to participate in the study was obtained, as well as consent to record the participants using a digital tape recorder. The researcher interpreted the content of the consent for the participants who seemed to have challenges in interpreting English and explained the content of the consent in isiXhosa. This is supported by Burns and Grove (2005:190) that subjects should have a specific agreement and understanding about what the subjects' participation involve.

Participation was voluntary in the sense that participants were informed of their right to self-determination, their right to anonymity, confidentiality and privacy concerning all information, meaning that participation in the study was voluntary and that they could withdraw at any stage should they wish to do so (Brink, 2009:32). Forrester (2010:112) concurs, claiming that participants ought to be made aware of this right, as well as their right to withdraw data after it has been collected from the start of the data collection process.

All participants were reassured that information in the report would not identify them personally, although Forrester (2010:112) suggests that qualitative researchers can never promise complete confidentiality but should rather clarify what will be done with the data and how participants' identity, will be protected. In this regard participants were addressed by the use of a pseudonym, for example "participant 1".

The researcher maintained anonymity by using numbers instead of names. Confidentiality was assured by keeping transcripts and the digital tape recorder under lock and key, allowing only access to the researcher. The participants were reassured that the researcher would not divulge the information and would do so only to the supervisor of the research. The interviewees were free and more secured in their interaction with the interviewer and were more willing to open up and to develop trust.

Interviews were conducted at an institution's antenatal clinic seminar room which was private and seldom used. This seminar room was only used by the researcher during data collection.

1.11 THE OUTLAY OF THE STUDY

The study consists of five chapters as follows:

Chapter 1

This chapter describes the relevance of the study to maternal care, the significance of the study, the research problem, the research question, the objectives, the research design, the methodology and the ethical considerations.

Chapter 2

In this chapter an in-depth literature review on health education rendered by midwives is discussed, including legislation and protocols on midwifery practices.

Chapter 3

In chapter 3 the research design and methodology are discussed in detail.

Chapter 4

The data analysis and the interpretation thereof are described in this chapter.

Chapter 5

The findings are discussed, conclusions and recommendations based on scientific evidence obtained in the study.

1.12 ACRONYMS AND DEFINITION OF TERMS

ANC	Antenatal clinic
MCH	Maternal and child health
MDGS	Millennium development goals
BANC	Basic antenatal care

Antenatal care

Antenatal care is the care of a pregnant woman and her foetus by health care staff, including midwives, from conception to the onset of labour (Fraser & Cooper, 2003: 251). Antenatal care in this study refers to the care provided to the pregnant woman by the midwife.

Antenatal registration

According to National guidelines for maternity care in South Africa, National Department of Health (2007: 20) registration status means any pregnant woman who has been informed regarding antenatal care (ANC) and the importance of early registration with an average number of four to six ANC visits during pregnancy.

Maternal mortality rate

This is defined as the death of a woman while pregnant or within the first 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes, per 100 000 live births (Cronje & Grobler, 2006 : 708).

Gravida

Gravida means the number of pregnancies including the present pregnancy, irrespective of the number of viable or live births (Sellers, 2003:173).

Registered Midwife

Midwife “means a person registered as such in terms of section 31 of the 2005 Nursing Act” (Act no. 33 of 2005).

The following definition of midwife has been composed by the International Confederation of Midwives and has also been adopted by the World Health Organization and the International Federation of Gynaecology and Obstetrics:

“A midwife is a person who, having been admitted to a midwifery educational programme that is duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery” (Meerdervoort, 2006:1).

Perception

The Oxford Dictionary (Pearsall, 1995:609) defines perception as an intuitive recognition of a truth. Perception in this study refers to how pregnant women perceive the health education they receive from midwives.

Experience

Experience refers to either the skill or knowledge gained in actual observation of facts or events, or how the individual is affected by the event (Pearsall, 1995: 365). In this study, pregnant women's experiences refer to how women have experienced the health education they receive.

1.13 SUMMARY

In this chapter the rationale, problem statement, goals and objectives for this study are described. In addition, a brief description of the methodology followed in this study and an indepth description of the ethical consideration are also described. The outlay of chapters was described and terms and acronyms defined.

1.14 CONCLUSION

Maternal morbidity and mortality have been a major challenge in obstetrics worldwide and at the institution under study the maternal mortality rate was found to be as a result of poor antenatal care. The focus of various researchers and the World Health Organization is to decrease maternal deaths and improve maternity care through information sharing and empowerment of pregnant women. Early registration and antenatal clinic attendance by pregnant women were encouraged to detect and treat early pregnancy related complications that may probably be a threat to the life of both the mother and the unborn baby.

The midwife in South Africa is the first contact person for most pregnant women and is expected to play a major role in facilitating effective health education throughout pregnancy.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

A literature study is done before, during and after the research to build on the existing research and compare the findings, thus assisting in identifying gaps and to develop a conceptual framework (Badenhorst, 2008:155).

The preliminary review of literature is aimed towards a clearer understanding of the nature and the meaning of the problems or challenges that have been identified (De Vos, Strydom, Fouche & Delport, 2004:128). This chapter entails a literature review that covers aspects of antenatal care focusing on the quality of health education rendered by midwives during pregnancy, legislation that controls midwifery practice, patients' rights, South African maternity guidelines, strategies and protocols of maternity care.

Burns and Grove (2005:128) describe the literature review as a process that is conducted to generate a picture of what is known about a particular situation. The purpose of which is to find similar studies, familiarize oneself with practical and theoretical issues related to the phenomenon of interest. The researcher therefore is able to compile a written report of what is known about the topic.

2.2 ANTENATAL CARE

Antenatal care (ANC) is the care of a pregnant woman and her foetus (unborn baby) by health care workers, including midwives, from conception up to the onset of labour (Fraser & Cooper, 2003:251). The provision of antenatal care during pregnancy through the public health services was a relatively late development in modern obstetrics. Not until the late 1930s did the authorities of the United Kingdom of Great Britain and Northern Ireland decide that all women should be offered regular check-ups and health education during pregnancy as an integral part of maternity care, some 30 years after the introduction of formalized labour and delivery care (Abou-Zahr & Wardlaw, 2003:2). Thus, pregnancy related complications would be detected and prevented early in pregnancy and would promote healthy maternal and neonatal outcomes.

In South Africa before 1994, poor access to health services, including antenatal care inequalities existed (UNICEF report, 2009). There were those with little or no access to health services due to the lack of infrastructure, transport and affordability amongst other factors. All pregnant women had to pay for antenatal services and thus could not manage to attend these

services because they could not afford to pay the fees (UNICEF report, 2009). It became apparent for the Government of National Unity to redress the imbalances of the past in terms of service delivery in South Africa. Consequently, the National Department of Health (NDOH) introduced the implementation of the Free Health Policy (FHP) in the public health sector in 1994 (Kautzky & Tollman, 1994:18). This strategy was targeted at women during pregnancy and children under the age of six years and was implemented to address the high maternal mortality rates especially amongst the disadvantaged women (African National Congress Health Plan, 1994:19).

Implementation of FHP in SA has made substantial progress in transforming maternal health care sectors. There are vast expanded numbers of clinics that render free maternity care ((Habib, 2009:iv). This led to the formulation of clearly defined maternity care guidelines, strategies, recommendations and protocols that ensure quality of care and stipulate that all pregnant women should be offered information regarding their pregnancy and that of the unborn child (Department of Health, 2007:7).

According to Anya, Hydera and Jaiteh (2008:iv) ANC is widely established and provides an opportunity to inform and educate pregnant women about pregnancy, childbirth and the care of the newborn. It is therefore expected that this care should assist pregnant women in making choices that would contribute to good pregnancy outcomes. Anya et al. (2008:iv) further elaborate that the aim of ANC is to equip pregnant women with knowledge that will enable them to make appropriate choices that will contribute to optimum pregnancy outcomes. Antenatal care has made health education programmes a standard component of care worldwide.

Therefore, the national health plan of the African National Congress (1994:20) stipulates that all health care workers, midwives included, should promote general health and encourage healthy lifestyles at all levels of maternity care. In this regard antenatal care is considered as the pillar of safe motherhood by identifying, managing high risks and providing health education to pregnant women, thus empowering families and communities to improve maternal health (Hofmeyer & Lamacraft, 2007:8).

2.2.1 Principles and components of antenatal care (ANC)

The comprehensive aim of ANC is to prepare the pregnant women for pregnancy, labour, puerperium, including lactation and the subsequent care of the newborn. (De Kock & Van der Walt, 2004:9). This aim may be achieved by following three major components of antenatal care relevant to this current study as follows:

2.2.1.1 Giving health education on health promoting activities

Activities include the promotion of exercises, diet and anticipated pregnancy related problems. Snyman (2007:7) recommends that pregnant women should be provided with information of the danger signs of high risk conditions for example a reduction in fetal movements, which if experienced by the woman should motivate her to seek health care.

2.2.1.2 Physical and psychological preparation for childbirth and parenthood

De Kock et al. (2004:9) encourage health workers to support and allay anxiety of pregnant women especially the primigravida, i.e. women pregnant for the first time, by giving health talks, encouraging antenatal exercises and facilitating maternity tours of the labour ward and surroundings.

2.2.1.3 Increase family centredness

Increasing family centred health in the home may include healthy lifestyles and a healthy diet. Chalmers, Mangiaterra and Porter (2003:203) recommend that ANC should be holistic, and should be concerned with intellectual, emotional, social and cultural needs of women and not only concentrate on their biological care.

2.2.2 Factors that form the cornerstone in prenatal care (antenatal care)

A survey conducted, in Florida University in 2002, aimed at finding implications for state policy and suggested the need for additional outreach to improve clinician practices related to health education and treatment of pregnant women. The findings recommended that continuity of care from prenatal care through delivery would be enhanced by emphasis on documenting interventions and on-going empowerment of pregnant women in the patient's health information that is provided on pregnancy, labour and delivery (Miller, Bentrup, Clarke & Garzarella, 2003:44).

Myer and Harrison (2004:50) in their study found that most women did not perceive significant health threats during pregnancy and in turn viewed more than one antenatal care visit as unnecessary. In this regard health education programmes promoting antenatal care were recommended and required to explain the importance of effective antenatal care toward maternal and child health. In view of these recommendations specific factors were identified that form the cornerstone of effective antenatal care in ensuring the best possible pregnancy outcomes.

2.2.2.1 Effective antenatal care (ANC)

Effective antenatal care as highlighted by the Department of Health is defined in terms of its accessibility to women who need it. ANC is said to be accessible if its services are available

and closer to pregnant women; the facility is utilized and health education is offered to empower women about their pregnancy. Utilization and accessibility can be improved by making services affordable in terms of cost and improving transport and communication (African National Congress, 1994a:45 and Kautzky et al., 1994:18).

Pregnancy is a natural process however despite this, it does not mean it is always problem free. Pregnant women rely on antenatal health services for care and information during this crucial time (WHO, 2005b:41). Hence, Snyman (2007:vi), recommends that the implementation of the basic antenatal care (BANC) package may assist to re-organize services at antenatal care level in order to optimise the impact of the midwives to improve the quality of education and care to pregnant women (Snyman 2007: vi).

The purpose of the BANC package is to facilitate client management and empowerment by midwives (Snyman, 2007: v).

The antenatal care also provides an opportunity to screen for and provide information on non-pregnancy related diseases such as HIV/AIDS and tuberculosis, which may influence the general health of the pregnant woman (WHO, 2005b:4). This was echoed by Miller et al. (2003:45) who further suggested the need for optimal awareness campaigns to improve clinician practices related to HIV/AIDS and the treatment of pregnant women.

In support of evidence-based care the World Health Organization (WHO) developed principles reflecting on current effective antenatal care (Chalmers, Mangiaterra & Porter, 2003:203).

The following principles are effective in antenatal care for normal pregnancy and birth:

- De-medicalised, meaning that essential care should be provided with the minimum set of interventions
- Pregnant women should be encouraged to be self-reliant of antenatal care by being empowered with clearly defined guidelines of maternity care
- Care should be multidisciplinary, involving contributions from health professionals such as midwives, obstetricians, neonatologists and trained traditional birth attendants, thus emphasizing team work
- Care should be culturally appropriate
- Care should be holistic and should involve women in decision making
- For care to be effective, influential people like partners and members of the family and community at large should be involved in facilitating and supporting pregnant women to follow advices given by midwives. (Chalmers et al., 2003: 203).

Antenatal care therefore attempts to ensure the best possible pregnancy outcome for women and their babies. This may be achieved by screening for pregnancy problems and the provision of information to pregnant women (Department of Health, 2002:18).

Trinh, Dibley and Byles (2005:1) further recommend that for ANC to be effective, women should have an adequate number of visits at appropriate times with sufficient ANC content. They further recommend that biomedical assessment based on medical history, physical examination, laboratory tests and health promotion and care provision must be emphasised.

2.2.2.2 *The significance of the time of registering (booking) the first visit*

The initial or first visit to the antenatal clinic is known as the 'booking visit'. This first meeting between the midwife and the pregnant woman at the antenatal clinic is called the first visit (Department of Health, 2002:19 and Pattinson, 2002:8).

A pregnant woman is expected to book as soon as she realizes that she is pregnant, usually at four (4) to five (5) weeks of missing a menstrual period (Department of Health, 2002:19).

The first visit is a very important visit and serves to classify the woman whether she requires the basic component of care (BANC) or specialised care, in addition to BANC. The approach in the BANC package separates the activities offered during the first and subsequent (follow-up) visits (Pattinson, 2002:8).

The antenatal activities are distributed over four visits so that each visit has a purpose. The subsequent visits are scheduled at 20, 26, 32 and 38 weeks gestation and follow the same format as the first visit based on the WHO model of antenatal care (WHO, 2005:46). The first visit is critical in that it provides a baseline against which the progress of pregnancy is assessed; health education is rendered, as well as intensive investigation is done (Pattinson, 2002:8 and Department of Health, 2007:8).

Booking visit (first visit) provides an opportunity for pregnant women to be given information and services that can help improve their health and that of the unborn baby thus, it gives midwives an opportunity to build relationships and reinforce maternal health messages for example on nutrition and they should put emphasis on danger signs and complications of pregnancy and what to report immediately if these should arise (Pattinson, 2002:8 and WHO, 2005:46).

In a study conducted in Ghana, Kenya and Malawi ANC interventions have been shown to be effective in the detection, treatment or prevention of conditions associated with serious morbidity or mortality; monitoring of chronic conditions, anaemia, for example screening for

and treatment of infections, including sexually transmitted infections and prevention of mother-to-child transmission of HIV (PMTCT). Antenatal care was also viewed as an important point of contact between health workers and women and an opportunity for the provision of health education – including how to detect pregnancy complications and development of a birth plan to ensure delivery at a health facility (Pell-mail, Meñaca, Were, Afrah, Chatio, Taylor, Hamel, Hodgson, Tagbor, Kalilani & Pool, 2012:4).

UNICEF and WHO report as cited by Ntombela (2005:3) recommended a reduction on the number of ANC visits in developing countries because of evidence that, having fewer ANC visits do not affect the outcome of care, other than women`s satisfaction levels. A decrease from twelve (12) visits to a less-costly four (4) visit-schedule, were recommended which did not result in an increase in adverse maternal and perinatal events (UNICEF & WHO report, 2003 and Pell-mail et al., 2012:7). Nonetheless, in a study conducted in Dar-Es-Salaam in 2007 it emanated that many ANC visits exposed pregnant women to more health education and counselling by midwives (Mpembeni, Killewo, Leshabari, Massawe & Jahn, 2007:8).

In South Africa pregnant women are encouraged to attend ANC before conception or during the first three months of missing menstruation. According to the maternity guidelines by Hofmeyer and Lamacraft (2007:20) a pregnant woman is accepted as a low risk woman, if she has had a minimum of three (3) ANC visits. Thus, three visits are postulated as necessary to monitor the progress of pregnancy and empowerment through health education. Pattinson (2004:7) and WHO (2005:3) recommend four (4) visits for low risk women who are eligible to receive routine antenatal care inclusive of health education.

Furthermore, it was identified that sociocultural beliefs have an impact on ANC attendance. Most pregnant women attended antenatal care when they were six or seven months pregnant (Ijumba, Ntuli & Barron, 2004:64). Substantiated further, Pell mail et al. (2012:20) found in their study that adolescents and unmarried younger women hid their pregnancies and delayed ANC visits to avoid the potential social implications of pregnancy, for example, exclusion from school, expulsion from their family home and partner abandonment. In Malawi, women were delaying pregnancy disclosure and ANC till the fourth month to avoid suffering witchcraft that could harm a pregnancy. In Kenya and in Ghana pregnant women and other community members described how they were at greater risk of witchcraft and sometimes attributed pregnancy interruptions to witchcraft.

According to Hubley (2008:134) it is a common complaint that members of the community ignore advice and continue to practise health damaging behaviours even if they know that it is harmful. In addition, health workers have a tendency to condemn the community and place the

blame on the traditional beliefs or poor education. The actual reason for failure is often that of the health education that contains irrelevant information which leads to unrealistic changes for example detrimental sociocultural practices that may lead to adverse pregnancy outcomes.

2.2.3 The antenatal record

The antenatal record is the principal record of the pregnancy and it must be completed at each antenatal clinic visit. The record is retained by the mother and she is given health education at all subsequent visits until delivery. Thereafter, it may be kept at the place of confinement or final referral place (Hofmeyer & Lamacraft, 2007:19).

In the Eastern Cape this record is in the form of a booklet which the pregnant woman carries from pregnancy up to six weeks post-delivery. The information contained in this booklet guides the midwives on the type of activity, health education and management expected to be rendered. A record of the pregnant women's health progress is also clearly illustrated. Clients from other institutions are allowed to continue using their ANC records to avoid duplication of information (Department of Health, 2007:19).

Smith, Shakespeare and Dixon (2007:16) in their study recommend the continuity of care during pregnancy as valued highly by women. The continuity of care during pregnancy also contributes to the importance of safety. The key point is that any health care professional who has built up a trusting and caring relationship with a pregnant woman is likely to identify potential problems earlier and therefore make pregnancy safer for the woman and her baby. They further recommend that health providers should then communicate in writing any issues of medical, psychiatric or social significance for the pregnancy, preferably with the woman's consent. Banta (2003:11) echoed that it is desirable that pregnant women should be monitored periodically to assure appropriateness of care and the high quality care thereof. Nonetheless, he further recommended that expensive technological interventions, such as home uterine monitoring and excessive routine ultrasound examinations that have not been found to be beneficial could be largely dropped from antenatal care, saving scarce resources and having little or no effect on outcomes. He emphasised the importance of antenatal care assessment. If it is sparse and not recorded sequentially and some entries are written retrospectively, there will be adverse effects on the life of the mother and the baby.

2.2.4 Skilled care during the antenatal period

United Nations Children's Fund (UNICEF) and the World Bank, called on countries to ensure that all women and newborns have skilled care during pregnancy, childbirth and the immediate postnatal period (WHO, 2004b:1-6). Skilled care refers to the care provided to a woman and her newborn during pregnancy, childbirth and immediately after birth by an accredited and

competent health care provider who has at her disposal the necessary equipment and the support of a functioning health system. Thus, a skilled attendant is an accredited health professional, such as a midwife, doctor or nurse, who has been educated and trained to proficiency in the skills needed to manage normal uncomplicated pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (WHO, 2004b:5).

Lincetto, Mothebesoane-Anoh, Gomez and Munjanja (2006:62) refer to skilled care as a tremendous opportunity that reaches a large number of women and communities with effective clinical and health promotion interventions. Efforts to strengthen skilled care should focus on universal coverage by addressing financial and cultural barriers reaching vulnerable groups, quality improvement to increase women's satisfaction and reduce drop out, from the health services and integration of programmes to maximise the contact between the woman and the health services.

In SA pregnant women are attended by registered midwives and obstetricians when there are complications.

2.3 PATIENTS' RIGHTS

The South African government's commitment to ensure the best possible pregnancy outcome is reflected in its constitution, relevant legislation and policies. Government policies and acts are aimed at improving all individuals' health status. The constitution of the Republic of South Africa 1996 (Act no. 108 of 1996) states that individuals have the right to:

- make their own decisions and access to health services concerning reproduction
- access information that is held by another person and that is required for the exercise or protection of any rights
- receive education in the official language of choice at a public health institution (Republic of South Africa, 1996:13).

Schott and Henley (2002:19) maintain that midwives tend to regard the way they organize maternity care as the best and the only way, ignoring the interests of the very women for whom the services are planned. They further indicated that consumer satisfaction increases if the service is acceptable and meets the expectations of women for whom it is provided. A client centred service should be provided through identifying what women want and need (Bennett & Brown, 2002:119).

The audit study conducted in Kwazulu Natal (KZN) by Hoque, Hoque and Kader (2008:66) support and concludes that the lack of proper care and lack of information represent missed

opportunities to impact optimally on maternal and perinatal health outcomes. This study further recommends that more strategies are urgently needed to empower pregnant women and improve antenatal care through a quality improving initiative.

Therefore, according to the national constitution (Act no. 108 of 1996:13) midwives are compelled and expected to provide relevant information and empower these women throughout their pregnancy. Furthermore, midwives should be mindful of the fact that pregnant women are human beings or individuals whose perceptions, according to Henderson's Health Seeking Behaviour Model, expect individualized care in the form of health education. The Henderson's Model assumes that health seeking behaviour is the result of interaction between characteristics of individuals, population and the surrounding environment (Trinh & Rubin, 2006: 3).

2.4 HEALTH EDUCATION: PREGNANT WOMEN'S RIGHTS

As described in paragraph 2.3 everybody has a right to information and to receive information in the language of their choice. The concept health education is a form of communication whereby information enables people to make decisions and to follow those health related activities at all stages of life which are conducive to proper health (Singh, 2006:ii). The goal of health education is to change behaviour by changing attitudes, encourage self-reliance and motivate people to make their own health decisions (Singh, 2006: ii).

The midwives' role therefore, is to promote and guide pregnant women to be self-care agents (Kaur et al., 2009:124). The midwives as nursing agents, should give health education and information on do's and don'ts and empower pregnant women on pregnancy related problems and outcomes to fulfill women's self-care demands (Sellers, 2012: 231).

In this regard self-care reliance is supported by Orem's theory of Self Care Agency as a human's ability or power to engage in self-care. The individual's ability to engage in self-care is affected by basic factors like age and sociocultural orientation and thus need midwives' intervention to enhance behavioural change (Cherry & Jacob, 2004:7). It is therefore important for midwives when giving health talks to pregnant women to treat individuals as unique beings and this will encourage good midwife- client mutual relationship, openness and co-operation. This statement is supported by Smith, Shakespeare and Dixon (2007:16).

Singh (2006: iii) recommends the use of different strategies to facilitate information sharing. Participatory method, group dialogue, woman to woman communication and involvement of influential people are effective instruction strategies in empowering clients on health

information. This will according to Singh, promote family and community educational material, essential for positive lifestyles and habits.

2.4.1 Attending antenatal clinic (ANC): an integral component of reinforcing health education

During ANC the midwife provides a woman-centred approach to the care of the pregnant woman and her family. Information is shared with women to facilitate them to make informed choices about their care (Fraser, Cooper & Nolte, 2006:237). The woman-centred approach will address the woman's physical, psychological and sociological needs. These needs will be gathered through a comprehensive, accurate history taking, an intensive assessment and investigation. Growth monitoring of the foetus and life threatening complications to both mother and unborn baby are detected early and treated accordingly (Fraser, et al., 2006:237). Expectations (Do's) and harmful practices (Don'ts) are clearly explained throughout pregnancy.

2.4.2 Expectations (do's) during pregnancy

The midwife as the first contact person during the antenatal period should advise the pregnant woman about general healthy life styles (Fraser et al., 2006:212). The pregnant woman is expected to:

2.4.2.1 Exercise

Pregnancy, birth and motherhood are physically demanding and a pregnant woman needs to be physically strong. There are some exercises that are not only essential for a pregnant woman to decrease pain and backache but also to improve her sex life (Kegel, 2010: ii and Hay-Smith, Mørkved, Fairbrother, Herbison, 2009: 4).

Exercise improves the blood supply to the vital organs of which the uterus is the most important organ during pregnancy as it carries the growing foetus. It also improves the muscle tone of the pelvic floor muscles thereby helping in stretching the perineum during birth (Sellers, 2003:261).

Essential basic exercises pregnant women are encouraged to do include walking for 30 minutes, pelvic tilting and squatting. McFarland (2012:1) and Raymond (2009: iii) recommend some benefits of squatting and pelvic tilting, namely:

- Hips become more flexible and the lower back muscles are toned and stretched.
- May help reduce the curve in the back and reduces pressure on the discs of the spine as your pelvis is tilted upwards.

- Excellent relief can be gained from either the full squat postures or modified forms of the squat.
- The pelvic tilt is a therapeutic exercise used to help postural problems and lower back pain.
- This type of exercise increases the strength of the lower back muscles. Pelvic tilts help women to experience a full range of motion in both the pelvis and lower back vertebrae.
- This move loosens up any stiffness and can improve posture.

2.4.2.2 Well balanced diet

The pregnant woman must be encouraged to enjoy a balanced diet that contains sufficient proteins, carbohydrates, lipids, minerals, iron, folic acids and vitamins (Fraser et al., 2006:210). Cognizance should be taken that the growing baby gets all its nourishment from its mother through the umbilical cord. If the mother is lacking in any vitamins and nutrients her baby might have a deficiency as well. Thus, a pregnant woman requires a balanced meal of approximately 2500 calories per day (Fraser et al., 2006:210).

The nutritional status of a pregnant woman is especially important if the mother is young and her overall mass is below the ideal mass, specifically when her mid upper arm circumference (MUAC) is measured and found to be less than 23cm, she is from a poor economic environment and is on a diet for a specific medical condition (Hofmeyer et al., 2007:21).

Maniche (2008:2) recommends that pregnant women should eat more food rich in iron because of high foetal/placental demand. Therefore, women should be advised to eat a high fibre diet and drink two to three litres of water daily to help prevent constipation. Liquids containing caffeine, such as coffee and cola drinks may have a dehydrating effect and should be avoided (Camilleri, 2012:2).

2.4.2.3 Clothing

The recommended clothing of a pregnant woman must be loose fitting and attractive. Maternity wear and comfortable shoes are recommended especially during the second trimester to encourage venous return from the lower limbs (Fraser et al., 2009: 212). According to Greenfield (2010:6) tight clothes will not hurt the unborn baby, but it may be uncomfortable as the size of the uterus increases.

Paula (2011: 5) recommends that a pregnant woman should wear cotton fabrics as it breathes and reduce the risk of vaginal infection. An increased vaginal discharge takes place during pregnancy and a frequent change in underwear is required to prevent vaginal infection.

Bloom (2010:3) suggested the flat shoe heel because the centre of gravity will change once the abdomen expands thus presenting the danger of falling forward. Many women also experience a change in foot size due to fluid retention which may cause an increase in shoe size.

2.4.2.4 Personal hygiene

Personal hygiene should always be an important part of a pregnant women's daily routine and may be more critical during this period as improper hygiene can lead to infection that may endanger the life of the unborn child (Johnson, 2010: i). Singh (2011: 43) substantiates that during pregnancy personal hygiene must be of utmost importance because improper hygiene can lead to infections which the baby can acquire through the mother, most times through amniotic fluid (liquor amnii).

The pregnant woman should be careful when cleaning the vulva and should avoid using numerous lotions and bubble baths that may lead to irritation and an allergy. The vagina is in close contact with and the pathway to the uterus and the foetus which may be infected. The pregnant woman should be advised to rather use a shower than a bath to avoid having dirt and bacteria entering the vagina (Johnson & Akanjuka, 2010:6).

2.4.2.5 Rest and sleep

Women are advised to sleep three hours during the day and twelve hours during the night (Sellers, 2003:1170). Ngwekazi (2010:36) echoed that pregnant women with pre-eclampsia should have adequate bed rest, 12 hours at night and a further 3 hours during the day, to ensure an improved blood flow to the heart and to the placenta. Nonetheless, Sellers (2012:244) recommends that women with mild pre-eclampsia, i.e. gestational protenuric hypertension (GPH) may be allowed to go home. They should stay in bed and only get up to go to the bathroom. If this is not possible the woman should be admitted to hospital. The National Maternity Care Guidelines Committee of the Department of Health (2007:91), state that rest and sleep improve blood flow to the placenta, thus preventing intra-uterine growth restriction associated with placental insufficiency which may result from pre-eclampsia.

Pregnant women are encouraged to sleep on the left lateral position to prevent pressure on the mother's inferior vena cava by the growing uterus. If pressure occurs on the inferior vena cava of the mother the return blood from the lower limbs flow is hampered which will result in a type of low blood pressure called supine hypotensive syndrome. This may ultimately decrease the blood supply to the foetus (Sellers, 2003:242).

According to Johns (2009: iv) bed rest has different levels and the pregnant woman should be advised according to the level of bed rest required. He further recommended that adequate rest is important but ambulation should be promoted to prevent complications, namely deep venous thrombosis and bedsores.

2.4.2.6 Safe sexual intercourse

Some pregnant women enjoy sexual intercourse during the first three months. This should be encouraged, if it is not contra-indicated, in that it may cause abortion (Robin, 2011: 10). The use of condoms is emphasised to prevent mother to child transmission (MTCT) of HIV (Fraser et al., 2009:212). Sex is safe as long as pregnancy is proceeding normally and women can have sex as often as they can and should also be advised to assume the best comfortable sex positions as long as it is safe and will not cause pressure on the enlarging abdomen (Mayo, 2012 : i).

2.4.3 Harmful practices (dont`s) during pregnancy

Women have been getting pregnant for centuries without too much bother, however there is a tendency today that friends and strangers will often offer contradictory advices (taboos) or practices of what is best during their pregnancy (Robert, 2010 :7). Some of this advice, practices and life style habits may threaten the life of the pregnant woman and her unborn child (Sellers, 2003:240). Pregnant women therefore should be made aware of the harmful effects or taboos.

2.4.3.1 Alcohol and substance abuse

Alcohol does cross the placental barrier and destroy the growing organs of the unborn child during the developmental stage (Sellers, 2003:231-232).

Marchick (2010:10) showed in her study that 4% of pregnant women used marijuana and cocaine during their pregnancy. The outcome resulted in potential multiple birth defects that included malformation of the foetal nasal bridge, drooping eyelids, mal- development of the brain tissues and an abnormally small head causing mental retardation and lifelong learning and behavioural problems. The babies were born prematurely, underweight, with deformed ribs and sternum, a curved spine and hip dislocation, as well as bent, fused, webbed or missing fingers.

According to the University of Virginia Health Systems, babies born with drugs in their systems go through withdrawals as a result of the drugs which leads to a condition known as neonatal abstinence syndrome. Neonatal abstinence syndrome is a term to describe a cluster of

symptoms a baby may have, such as trembling, excessive crying, seizures, poor feeding, diarrhoea and dehydration (Marchick, 2010:11).

The woman should be encouraged to stop or gradually reduce alcohol consumption and substance abuse in view of the effects of alcohol and substance abuse during pregnancy which mostly affects the developing organs of the foetus (Marchick, 2010:11).

2.4.3.2 Smoking

During history taking smokers should be made aware that smoking is detrimental to the life of both the baby and the mother. Therefore, women should be empowered about the effects of nicotine to the placenta, that it causes infarcts (hardened maternal surface of the placenta). The infarcted maternal surface of the placenta makes it difficult for nutrients and gases to pass through the placenta, thus causing poor foetal growth and subsequent death of the foetus in severe cases (Sellers 2003:243). This is echoed by Woolston (2011:5), the obstetrician of Providence hospital Michigan, that smoking cigarettes causes too many complications which results in premature or still births. Cigarettes contain chemicals like cyanide and lead, as well as nicotine and carbon monoxide. These chemicals enter the mother's blood circulation which is the baby's source of oxygen and nutrients, and narrows the blood vessels including those of the umbilical cord. A shortage of oxygen may have an adverse effect on the babies' growth and development which can lead to premature birth or underweight (Welch, 2011: i).

In a study conducted in 2011 in United States of America it was found that babies born of cigarette smokers were born with lung and heart defects because of delayed development of the lungs and heart. These heart defects include atrial septum and right ventricular outflow tract obstructions (Woolston, 2011: iii).

2.4.3.3 Travelling

Travelling during pregnancy is not detrimental during the first trimester but may result in fatigue and frustration and should be prohibited during the third trimester as this may cause premature rupture of the membranes which will lead to preterm labour. Travelling by airplane may be dangerous if the altitude is more than 3 000 meters as this may lead to abortions or preterm labour (Sellers, 2003:243). According to Mayo (2012:13) during the first and second trimesters travelling should be prohibited if the pregnant woman is experiencing vaginal bleeding and swelling of the lower limbs. With regard to travelling by airplane there is a 3% risk of birth defects and 15% risk of miscarriages which may probably be due to exposure to radiation and high altitude respectively (Mayo, 2012:13).

In this regard pregnant women should be encouraged to seek medical help before they plan to travel or fly locally or internationally (Sellers, 2003: 243).

2.4.3.4 Lifting of heavy objects

The pregnant woman becomes unable to lift a load because the centre of gravity and balance change during pregnancy. Additionally, the hormones during pregnancy cause the connective tissue, ligaments and tendons to soften. Therefore, if the pregnant woman lifts a heavy load she can injure herself but will not harm the pregnancy and the baby (Mayo, 2012:3). It is further recommended that the maximum load a pregnant woman should lift in late pregnancy should be reduced by 20% to 25% to that which she was able to lift in her pre- or non-pregnancy state (Marchick, 2010:12).

In this regard strenuous exercises or occupation should be identified during history taking at the registering stage so that the woman is encouraged to avoid such exercises. If the woman is employed and is doing strenuous exercises the midwife must facilitate and advise the supervisor of the woman to allow the woman to perform lighter work. She must also be encouraged not to lift or carry heavy objects at home or even lifting her own child as this will cause preterm labour or premature separation of the placenta (abruption) (Sellers, 2003: 243).

2.4.4 Danger signs and obstetric emergencies

The South African Nursing Council (SANC) introduced regulation 2488 of October 1990 in terms of section 45(1) (q) of the Nursing Act no.50 of 1978 as amended by Act no 33 of 2005 to regulate a midwife's practice, including antenatal attendance.

Pregnant women are informed to adhere to the stipulated return dates but obstetric emergencies such as vaginal bleeding, severe headache, rupture of waters and diminished foetal movements, requires them to seek medical help immediately. A pregnant woman who experiences any of these danger signs should immediately report to the health centre as it is a danger or threat to the life of the woman and the unborn baby (Sellers, 2003:993).

Obstetrical emergencies are described as an occurrence of serious or dangerous nature, developing suddenly and un-expectedly, demanding immediate attention either during pregnancy, labour or puerperium (Harbi, 2008:1). A registered midwife shall, subject to the provision of regulation R2488, sub regulation 4 of rule 10(1), with the consent of the pregnant woman, advise the woman to seek medical help immediately when she experiences any signs of an obstetrical emergency. These signs should be emphasised and explained so that women understand the effect hereof to the life of the unborn as stipulated in rule 10 of SANC

Regulation, R2488 of October 1990 in terms of section 45 (1) (q) of the Nursing Act no.50 of 1978 as amended by Act no 33 of 2005.

2.4.4.1 Vaginal bleeding

A pregnant woman is not supposed to bleed during pregnancy until the baby is born (Sellers, 2003:1193). This type of bleeding is classified as antepartum haemorrhage and is usually due to placenta implantation, abortion, polyps, cervical cancer and premature separation of either normal situated or abnormal situated placenta (Department of Health, 2007:94). Antepartum haemorrhage therefore is any excessive or scanty bleeding from the vagina or from the genital tract (birth canal) during pregnancy after the 26th week of pregnancy up to the delivery of the baby (Harbi, 2008: iii and Cronje & Grobler, 2006:202).

According to data obtained in 2007 of the South African Enquiries into Maternal Deaths (SAEMD), haemorrhage remains the third cause of maternal deaths associated with substandard care and lack of information (Department of Health, 2007:7). The midwife therefore should, according to the Maternity guidelines, recommendation ten (10) empower women to report any haemorrhage at the health centre. This should be treated as an emergency and the woman should be admitted for bed rest (Department of Health, 2007:8).

Gabbe, Niebyl and Simpson (2007:9) suggest that women should know the basic facts about bleeding and that they should wear a sanitary pad or panty liner to monitor the amount of blood lost and should bring this to the health centre for the doctor to see. They should never wear a tampon or introduce anything else into the vagina as this may cause excessive vaginal bleeding which may result in the death of the baby. The baby will be deprived of nutrients and oxygen from the mother resulting in death. Douching or sexual intercourse while still experiencing bleeding should be avoided as this will lead to a further increase in excessive bleeding.

2.4.4.2 Severe frontal headache

Mayo (2011:7) recommends that pregnant women be empowered with various common causes of headaches during pregnancy. These include headaches that are stress related which can be relieved by relaxation techniques and more often by moderate exercises. Other common causes of headaches during the second trimester of pregnancy are associated with hunger, bad smells and dehydration. These could be relieved by drinking lots of fluids and eating food with high calories per day and they should try to avoid bad smells commonly caused by noxious substances (Mayo, 2011: 7).

If a headache is not relieved and is associated with dizziness and visual disturbance women should be advised not to take medication that is not prescribed by the doctor but must seek medical help because continuous severe headache is usually associated with high blood pressure. This could be an indication that the brain is affected due to severe vasospasms and consequent rupture of blood capillaries of the brain tissue and of various vital organs like the kidneys (Sellers, 2003: 1166).

Raised blood pressure is abnormal during pregnancy because in a normal pregnant woman blood pressure remains normal or decreases due to relaxation and dilatation of blood vessels caused by the effect of progesterone (Fraser et al., 2009:178).

It is therefore important for the pregnant women to be informed of this type of headache as a symptom that if neglected may lead to eclampsia (Sellers, 2003: 1167).

2.4.4.3 *Diminished foetal movements*

The pregnant woman starts to feel foetal movements as early as sixteen to twenty weeks of missing her menstrual period (Fraser et al., 2009:195). The normal frequency of foetal movements should not be below four kicks in an hour or less than ten kicks in twelve hours. Women have always known that foetal movement is the best sign of their baby's wellbeing in utero and is regarded as reliable, simple and effective screening for their babies wellbeing (Navot, Yaffe & Sadovsky, 2007:19). Women should be able to feel their babies kicking, turning and twisting especially after meals. Prior to foetal death the foetal kicks become sluggish for about two to five days (Sellers, 2003:1701). The pregnant woman needs to be told of the importance of detecting these symptoms in an effort to reduce delay in seeking urgent medical intervention (Navot et al., 2007: 22).

2.4.4.4 *Severe epigastric pain*

Women need to differentiate between heartburn and epigastric pain. Heartburn is caused by reflux of gastric juice from the stomach due to relaxation of the cardiac sphincter. It is a burning and irritating sensation in the oesophagus. It is usually felt by the woman when she has been lying flat with no pillows (Fraser et al., 2009:209).

Epigastric pain is due to congestion and engorgement of the blood vessels supplying the liver or the liver may be ruptured resulting to a condition called HELLP syndrome, that is haemolysis, elevated liver enzyme and low platelets (Pete Steckl, 2009: ii; Sellers, 2003:1166). Therefore it is important for a pregnant woman when feeling this severe epigastric pain to immediately seek medical help.

2.4.4.5 Scanty urine

Due to the anatomical position of the bladder in relation to the uterus a normal pregnant woman passes urine frequently because the growing uterus presses on the bladder and there is an increase in glomerular filtration rate (GFR) resulting in low levels of creatinine and urea in the blood circulation (Kaur Nareng et al., 2011: iii ; Fraser et al., 2006:208). Small amounts of urine are passed frequently at 30ml per hour but when the kidney is damaged less urine is passed or not passed at all. However, it may not necessarily be an indication of renal failure but can be due to poor fluid intake (Kaur Narang and Signhal, 2011: iii).

Pre-eclampsia sets in as a result of high blood pressure which may result in renal failure. The intravascular volume expansion does not occur which leads to glomerular dysfunction as a result of a damaged nephron. Clinical manifestations of renal failure include oliguria, high levels of creatinine and serum urea, proteinuria and generalised oedema (Kaur Nareng and Signhal, 2011: iii). Women should be empowered to report scanty urine for urgent intervention to exclude renal failure.

2.4.4.6 Excessive vomiting (Hyperemesis gravidarum)

Hyperemesis gravidarum is an extremely persistent nausea and vomiting during pregnancy that may lead to dehydration (Sellers, 2003:999). It is said to affect most pregnant women due to a combination of hormones, specifically human chorionic gonadotrophin (HCG) and carbohydrates metabolism (Fraser et al., 2009:207). It may be caused by multiple pregnancies, hydatidform mole, with pregnancy rejection and an attention seeking attitude especially amongst unmarried women (Vorvick, 2009: 20; Sellers 2003: 999).

In this regard midwives must be able to identify the predisposing factors whether they are psychological or due to pregnancy related illnesses. The pregnant woman should be educated because if vomiting persists it may cause severe dehydration which may affect the unborn baby. It should thus be reported to a hospital (Sellers, 2003:999).

2.4.4.7 Oedema not relieved by rest

Oedema is physiologically normal during pregnancy affecting the ankles and subsides with rest (Fraser, 2009:250). Excess fluid collects in the tissues due to some hormonal changes in the blood that causes some fluid to shift into the tissues (Simkin, 2007: 3). In addition, the growing uterus places pressure on the pelvic veins and the inferior vena cava causing a backflow on the lower limbs.

The pressure of the growing uterus slows the return of blood from the legs, causing it to pool, forcing fluid from the veins into the tissues of the ankles and feet (Simkin, 2007:3). This type of

swelling may be relieved or may subside if the woman elevates her feet and avoids standing for a long time or crosses her legs or ankles while sitting. She must also be advised to wear loose clothes to allow the free flow of blood (Fraser, 2009: 250).

Women should seek advice from a medical practitioner or from a midwife if the swelling does not subside after complete rest. Medical help is also needed if the women notices swelling of the face or puffiness around the eyes, as well as a tight wedding ring which may be a sign of an increase in blood pressure and may lead to eclampsia that will affect the life of the mother and the baby (Roger, 2007: i).

2.4.4.8 Abnormal vaginal discharge

Excessive white vaginal discharge is normal during pregnancy due to hypertrophy of the epithelial cells of the vaginal tissues resulting in an acidic vaginal discharge called leucorrhoea with a characteristic smell (Fraser et al., 2009:176 and Robert, 2007:9). Thus, women should be advised to keep the vaginal area clean and dry and make use of panty liners, wear loose pants or skirts and cotton underwear (Robert, 2007:9). When labour starts the discharge will be a bloody mucus-streaked "show". This is the plug that seals the cervix at the entrance of the uterus. When it loosens and comes out it is one of the signs that the woman is in labour (Gary, 2007: 9-10).

If the vaginal discharge is unpleasant and fishy smelling, frothy yellowish or green, thick and curdy or the woman has itchy sores in the genital area and experiences pain when passing urine she must be advised to seek help as these signs need urgent treatment for infection (Gary, 2007:10). If this infection is not treated it may cause chorioamnionitis. This will further cause amniotic fluid infection syndrome in that liquor will be infected and cause infections that infect the unborn baby and the outcome may be a still born (Sellers, 2003:1267). Pregnant women therefore should report this type of discharge so that it may be treated early before infections affect the unborn baby.

2.4.4.9 Premature rupture of membranes

Premature rupture of membranes is the rupture or breaking of the foetal membranes during pregnancy before 37 weeks of gestation or before the onset of labour (Tanya, Medina & Ashley Hill, 2006: i).

Numerous risk factors like sexually transmitted infections lead to infections of the foetal membranes (chorio-decidual) and or accidents that cause pressure on the bulging abdomen which results in the rupture of the membranes (Tanya et al., 2006:1). Women should be advised to report to the health centre once they observe a gush of water coming from the

vagina and which is followed with continuous leakage of waters (Mercer, 2003:6). Premature rupture of membranes may lead to prolapse of the umbilical cord depriving the baby of oxygen and food (Lieman, Brumfield, Carlo & Ramsey, 2005:43).

2.5 SUMMARY

The researcher in this chapter has presented the literature review relating to antenatal care focusing on the content and the quality of health education rendered by midwives during the antenatal period, legislation that controls the midwifery practice, patient's rights, South African maternity guidelines, strategies, pillars and protocols of maternity care.

2.6 CONCLUSION

The literature review based on the health education of the pregnant woman during pregnancy has specifically shown the importance of health education during the antenatal period. The importance of early assessment, diagnosis and management of potential problems which could be a risk to both the mother and fetus if left unattended, have been emphasised. It is imperative that the midwife is skilled and competent in the basic assessment of women during pregnancy to enable her to identify any problems which may pose as a risk to the health of both the fetus and the mother. The aim is to prepare the woman for pregnancy, labour and care of the newborn. ANC effectiveness and accessibility facilitate utilization and compliance by pregnant women. Registered midwives and change agents offer health education throughout pregnancy until delivery.

In the next chapter 3 research methodology will be discussed.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The design of the study and method used to collect and analyse data will now be discussed. The background and rationale of the study, as well as a detailed literature review were discussed in chapters one and two respectively. In this chapter the research methodology that was applied to determine the experiences and perceptions of pregnant women regarding health education given during the antenatal period will be described.

3.2 RESEARCH SETTING

This study was conducted in the Eastern Cape at Buffalo City Municipality at an institution in East London where all maternal and antenatal services are rendered by skilled midwives and obstetricians from Monday to Friday. Interviews were conducted at the institution's antenatal clinic seminar room which was private and seldom used by the staff.

3.3 RESEARCH DESIGN

Research methodology encompasses the planning, structuring and execution of research with emphasis on actual research process (Henning, Gravett & Van Rensburg, 2005:101).

According to Mouton (2003:161) a qualitative or naturalistic evaluation approach involves the use of predominantly qualitative research methods to describe and evaluate the performance programmes in their natural setting by focusing on the processes of implementation rather than on quantifiable outcomes.

In this study a qualitative approach with an explorative descriptive design was applied to explore the experiences and perceptions of pregnant women with regards to the health education given during the antenatal period. The research question which guided this study was: What are the experiences and perceptions of pregnant women regarding the health education given by midwives during the antenatal period?

3.4 POPULATION AND SAMPLING

According to De Vos et al. (2004:190), the term population refers to all the elements, objects or substances that meet the inclusion criteria in a given universe thereby setting boundaries on the study.

The sample was chosen from the total population by means of purposive sampling. This type of sample is based on the judgment of the researcher, in that a sample is composed of elements which contain the most characteristic, representative or typical attributes of the population (De Vos et al., 2004:198). Participants are selected because they are believed to be able to give the researcher access to a special experience that one wishes to understand (Henning et al., 2005:102).

Participants were chosen from the clinic register by choosing the first two listed pregnant women scheduled and available for that day. Only ten (10) pregnant women were selected from the total population of 340 women (N=340) because in qualitative research study the sample size determines the saturation of the data (Henning et al., 2005:102). Thus ten interviews were conducted until a point of saturation was reached and no new information was being elicited.

3.4.1 Inclusion criteria

Inclusion criteria for this study were all pregnant women who attended the clinic for the second time for antenatal care services in 2012.

3.4.2 Exclusion criteria

- Pregnant women who for the first time attended the antenatal clinic.
- Professional nurses, midwives or doctors who were pregnant.
- The pregnant women who were not willing to participate in the study were also excluded in this study.

3.5 DATA COLLECTION TOOL

Data was collected through semi-structured interviews using an interview guide as reflected in Annexure F with individual participants. This interview guide consisted of three open-ended questions in both Xhosa and English based on the objectives set for this study. According to Kobus, Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen, Plano and Van der Westhuizen (2009:87) an interview is a two way conversation in which the interviewer asks the participant questions to collect data and to learn about ideas, beliefs, views opinions and behaviours of the participant. Semi-structured interviews are considered to be the best way to gain an understanding of people's perceptions as they require the participant to answer a set of predetermined questions and allow for the probing and clarification of answers (Kobus et al., 2009:87).

3.6 PRETEST /PILOT REVIEW

According to Burns and Grove (2005:42) a pretest is a smaller version of a proposed study conducted to refine the methodology by using similar subjects; the same setting; the same treatment and the same data collection and analysis technique. A pilot interview was done as pretest to one (1) woman to test the feasibility of the study, including the methodology. The researcher used an interview guide that was to be used in the main study.

3.7 TRUSTWORTHINESS

For the purpose of this study validity of the data was assured by applying the four principles of trustworthiness as described by Lincoln and Guba (1985) in De Vos et al. (2004:331). These principles include transferability, dependability, confirmability and credibility thereby ensuring that the data collected accurately represents the opinions of those who have been studied.

3.7.1 Transferability

Transferability refers to the degree to which the findings can be applied to other contexts, settings and other groups (De Vos et al., 2004:331). The principle of transferability in qualitative research is impractical as the study is conducted in the naturalistic setting with the aim of describing the experiences of a particular group of participants, as supported by Kobus et al. (2009:298).

Transferability could be supported by the use of models and theories as applied in this study, Orem is applied based on self-care theory of nursing process and that evaluation is an ongoing process (Fitzpatrick & Whall, 2005:116).

3.7.2 Dependability

Dependability refers to the degree to which the reader can be convinced that the findings did indeed occur as the researcher says they did (Kobus et al., 2009:297). The researcher ensured this principle by using peer examination (one member of the local research team) to independently assess the study and analyse the data. In addition, the researcher summarised and reflected on the participants' responses and then verified the transcriptions with the participants to determine the accuracy of the findings.

3.7.3 Confirmability

Confirmability refers to the degree to which the findings are a function solely of the informants and conditions of the research and not for other biases, motivations and perspectives (De Vos et al., 2009:331). The supervisor of the researcher checked the transcripts, interpretations, conclusions and findings made by the researcher to enhance the neutrality of the data.

Confirmability was ensured by reflexive analysis whereby the supervisor could assess the researcher's own background and experience in the field of study (De Vos et al., 2004:331). In qualitative research, a member check, also known as informant feedback or respondent validation is a technique used by researchers to help improve the accuracy, credibility, validity and transferability of the data (Tinggaard, 2008:15). Confirmability was ensured during data collection by using a member checking method. In this regard the digital tape recorder was replayed so that the participants were being given an opportunity to listen to their comments and voices. The researcher kept on summarizing or reflecting on responses and then questioned the participants to determine accuracy and exercised skill to gain information for which no explicit rationale had been articulated.

3.7.4 Credibility

Credibility refers to the accurate presentation of a particular context or event as described by the researcher giving assurance that the researchers' conclusions stem from the data (Kobus et al., 2009:297). Credibility establishes internal validity by taking into consideration criteria such as prolonged and varied experience (De Vos, 2004:331). Peer examination will include discussions of the research process and findings with other impartial colleagues who are knowledgeable about the qualitative methodologies (De Vos, 2004:331). In this study research unit of the institution under study which is predominantly manned by experienced researchers were approached for help and advice. One participant was interviewed in the presence of one of the researchers to listen to the introduction and how questions were asked. This participant was not included in the study.

The researcher used digital audiotapes, as well as a diary in case there were notes that had to be taken during the interview process to ensure the effective capturing of data.

3.8 DATA COLLECTION PROCESS

In-depth interviews with pregnant women were conducted using open-ended questions. Open-ended questions are posed in a way that suggest no obvious answers and it is therefore intellectually honest and do not expect or lean towards an obvious answer (Kobus, Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuis, Pietersen, Plano & Van der Westhuizen, 2009:4).

The researcher approached two pregnant women per day for five days out of ten (10) pregnant women using a tape recorder to record an in-depth interview individually.

The interviews were conducted in Xhosa and English by the researcher herself, as some women were Xhosa and some were English speaking. Such interviews are used when the

researcher wants to obtain an in-depth, thorough description and understanding of the participant's world (Henning et al., 2005:103). De Vos (2004:329) recommends a digital tape recorder to be used to record the interviews to allow a much more exact recording than notes taken during the interview. The use of the tape recorder was explained to the pregnant women and permission obtained before using it.

Participants were offered sweets since eating together tends to promote dialogue and communication within a group as described by De Vos et al. (2004: 309).

During the interview the researcher and the pregnant woman were sitting facing each other to promote eye contact. Verbal responses like "mm", "I see" were used to indicate that the researcher is listening and is concerned and understands the feelings to such an extent of even repeating or reflecting on what is said by the participant. Participants were addressed by using pseudonyms to maintain anonymity and were continuously made to be aware of their right to withdraw data after it has been collected from the start of the data collection process as echoed by Forrester (2010:112).

3.9 DATA ANALYSIS

Data analysis involves "breaking up" the data into manageable themes, patterns, trends and relationships (Mouton, 2003:108).

The tape recordings of the interviews were transcribed, meaning it was typed verbatim to enable content analysis. The interviews were then translated into English to make the data accessible to non-Xhosa speaking members involved in the study. The researcher is Xhosa speaking and speaks English as well. The transcribed data was analysed and validated by the researcher with the help of the supervisor. The transcribed data was analysed using Tesch's eight steps of data analysis as proposed by De Vos et al. (2004:331).

Tesch's steps can be described as follows:

- The researcher listened to the tape recordings. All transcripts were read by the researcher to get a sense of them as a whole and then ideas were jotted down as they came to mind.
- The researcher then selected one interview at a time - it could be the most interesting - but went through it while asking herself what was the underlying meaning in the information and wrote her thoughts in the margin (alongside). The researcher also wrote her ideas and meanings in the margin. This means the researcher listened to responses one by one and applied thoughts and meaning to each and jotted down the meaning of each separately.

- Having completed the above task with a number of transcripts the researcher listed the identified topics and grouped similar topics into major topics, unique topics and leftovers. This process was repeated with all the transcripts and themes that emerged were then clustered into 'Themes', 'Sub-themes' and 'Categories'.
- The topics were abbreviated, coded and written next to the appropriate segments of the text while checking if new ideas emerged. Codes were then allocated to similar topics. This exercise was repeated with all the transcripts by coding all the topics.
- The most descriptive wording for the topic was checked and placed into categories. Related topics were grouped together to reduce the total list of categories, and then lines were drawn between categories to show interrelationships. The researcher identified persistent words, phrases and themes and grouped them into categories.
- A preliminary analysis of data belonging to each category was done by assembling categories in one place. The data in each category was grouped together (De Vos et al., 2004:343).
- This data analysis was done with the help of the supervisor to ensure credibility, that is, data was checked to see if re-coding is necessary and the process of analysis was then finalised.

Bracketing, as one of the reasoning strategies necessary to analyse data in qualitative research was utilized as highlighted by Burns and Grove (2005:279). In this strategy the researcher suspended or laid aside what was known about the experiences being studied thereby facilitating the "seeing" of all the facets and the information of new constructs (De Vos et al., 2004:337).

3.10 SUMMARY

The provision of a detailed description of how population and sampling, the research design, the data collection process and data analysis were applied, were described in this chapter. The next chapter, chapter 4 data analysis will be discussed.

CHAPTER 4: DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 INTRODUCTION

This chapter entails an analysis and interpretation of data collected by means of digitally tape-recorded interviews of the experiences and perceptions of pregnant women regarding health education given during the antenatal period.

Data analysis and interpretation involve “breaking up” the data into manageable themes, patterns, trends and relationships (Mouton, 2003:108). The purpose of analysis is to reduce data to an intelligible and interpretable form so that the relations of research problems can be studied, tested and conclusions be drawn (De Vos, 2003:203).

During data collection and analysis it emanated that midwives emphasised the content of obstetric emergencies that pregnant women should report on and the implications thereof on the outcomes of the life of the unborn baby. This will be highlighted under categories and themes under table 4.1.

4.2 DATA ANALYSIS

For the purpose of this study qualitative analysis was conducted to obtain an in –depth understanding of the experiences and perceptions of pregnant women regarding health education given during the antenatal period to determine the content, quality and the applicability of health education given by midwives during pregnancy. The following Xhosa / English semi- structured questions were used to conduct this analysis:

Xhosa: Khawundixelele ngowakuxelelwa ngamanesi ukuqala kwakho kule kliniki ngezi zinto zilandelayo:

- Ukubaluleka kokuhamba ikliniki
- Izinto ekufuneka uzokuzixela ngokukhawuleza esibhedlele okanye ekliniki
- Izinto omawuzenze nomawungazenzi xa ukhulelwe .Unike izizathu.

English: What can you tell me about the information you received from the midwives during your first visit with regards to the following:

- Importance of attending antenatal clinic?
- Problems that you must report on immediately at the clinic or hospital?
- Do`s and don`ts during pregnancy and why?

These questions were formulated to answer and fulfill the objectives of this study. Therefore, data are discussed according to the categories which reflected these questions. Common themes and subthemes were identified according to the categories (see table 4.2.).

4.3 DEMOGRAPHIC DATA

All participants were females who came to the clinic for the second time. Age, distribution and parity were not applicable in this study and were therefore excluded. All participants were from urban and rural areas around East London.

The participants spoke Xhosa and English. Two participants were Afrikaans speaking but preferred English because they indicated that health education is given either in English or Xhosa by the midwives. IsiXhosa responses and reflections by participants were translated into English by Dr Nomsa Satyo, Head of Department (HOD) of African languages at the University of Fort Hare (see Annexure F).

4.4 CATEGORIES AND THEMES

Categories and themes are displayed in table 4.1 and subthemes in table 4.2

Table 4.1 Categories and themes identified during data analysis

4.4. Categories	4.2. Themes
4.4.1. Antenatal clinic attendance	4.4.1.1 Importance of attending antenatal clinic
4.4.2. Danger signs of pregnancy	4.4.1.2. Obstetric emergencies (problems) that need immediate attention
4.4.3. Expectations/advices needed to: be observed by pregnant women	4.4.1.3. Do's and Don'ts during pregnancy

4.4.1 Theme 1: Importance of attending antenatal clinic

Table 4.2: Themes and subthemes

Theme 1	Subthemes
4.4.1.Importance of attending antenatal clinic	4.4.1.1. Information on health of both mother baby 4.4.1.2. Early detection of abnormalities and treatment 4.4.1.3. Growth monitoring of the baby 4.4.1.4. HIV testing, treatment (ARVS) 4.4.1.5. Support consequent to disclosure of HIV status 4.4.1.6. Promotion of breastfeeding in the context of HIV/AIDS 4.4.1.7. Increased client- midwife relationship 4.4.1.8. Individualized care and language of choice

4.4.1.1 Information on health of both mother and baby.

The statements displayed below describe how participants experienced and perceived midwives as well-informed and as sources of help on pregnancy related conditions. Participants indicated that they left the clinic being well-informed about their state of health and that of their unborn babies' health. In this regard participants 4 and 8 indicated that they left the clinic well-informed about the importance of breastfeeding and how to breastfeed. Participants 7 and 8 reflected that it is important to attend the clinic because they gained information on the signs of labour and how pregnancy changes their normal physiology of the whole body.

These perceptions are reflected in the following quotes:

Participant:2 (day 1) "Oh yes they teach and every time you come here you are told that your baby is healthy and growing well and how is my body working when I am pregnant."

Participant:3 (day2). "Shame, they teach us about keeping yourself healthy for example when I was tested positive I was advised to use condoms."

Participant:4 (day 2) "They teach us about importance of breastfeeding and that it is right for the baby to grow."

Participan:8 (day 4) "They taught me to breastfeed the baby". "Ok, this is my first pregnancy I did not know what to expect when labour is starting and how old was my baby when I came here. I know all those things now."

4.4.1.2 Early detection of abnormalities and treatment

Early detection of abnormalities during pregnancy was reflected by participants as another important reason to attend antenatal clinic. In this regard participants perceived that abnormalities can be detected and treated early to ensure successful pregnancy outcomes. Participant no. 3 and 8 reflected that it is important to attend antenatal clinic (ANC) so that congenital abnormalities are detected during pregnancy rather than to be detected late when one is in labour and by that time nothing could be done. Participant no.10 highlighted the fact that during the antenatal care period abnormal vital signs like high blood pressure are detected and treated early.

Participant:1 (day 1)"Midwives told me that it is important to come here because something wrong to me and my baby will be found early and I will be helped."

Participant:3 (day2) "Abnormalities like Siamese twins can be detected early in pregnancy rather than coming late when in labour when there is nothing that can be done."

Participant:7 (day 4) "It is important to attend antenatal clinic because if your baby is not normal it is discovered early like if you have twins in your stomach."

Participant:8 (day4) "Abnormalities like baby with big head can be detected early in pregnancy rather than coming late when in labour when there is nothing that can be done."

Participant:10 (day5)"That I have 'Pressure' with my first pregnancy; it was discovered because I was attending this clinic."

4.4.1.3 Growth monitoring of the fetus

Six participants reflected that they were encouraged by the midwives to attend antenatal clinic so that their baby's growth and wellbeing could be monitored and that they had to adhere to their scheduled return dates. Participant no.2 also highlighted that if she is compliant to swallow iron tablets the baby will develop and grow well. Therefore, the following responses on growth monitoring as one of the important reasons of attending ANC were acknowledged:

Participant:1 (day1)."Midwives told me that my baby will be checked if growing normal if I come during my schedule date."

Participant:2 (day1) "Your baby will be checked if growing well".

Participant:4 (day2) "Nurses check if the baby is growing well and is breathing inside my tummy."

Participant:5 (day3) "At this clinic you are told that your baby is growing well and the heart is still beating well, ja ... there is a lot maan that you get from nurses when you attend at this clinic."

Participant: 6 (day3) "They touched my tummy and said my baby is growing well."

Participant:10 (day5) "I was told that it is important to attend the clinic to know the growth of my baby inside and if everything is going well."

Participant:2 (Day1) "I was told to swallow clinic tablets every day because if I do so my baby will grow normal and if I come to the clinic regularly nurses will keep on checking if my baby is growing well."

4.4.1.4 HIV testing and treatment (ARVs)

Women were compliant to take their ARVs and supported each other. One participant reflected that it is important to attend antenatal clinic because during her first visit to the clinic she was counselled and tested for her HIV/Aids status. She tested positive and was advised to start on treatment to prevent mother to child transmission of HIV. This is how she reflected:

Participant:5 (Day 3) "To me It is important to attend this clinic because when I tested positive I was afraid that my baby is going to be affected and die but midwives told me that if I condomise and start on ARVs there are limited chances that my child will be affected."

4.4.1.5 Promotion of breastfeeding in the context of HIV

Promotion of breastfeeding in the context of HIV was reflected by five of the ten participants and it demonstrated correct adequate information about HIV and AIDS. This also reflects that in this institution HIV/AIDS education is integrated into basic antenatal care and participants are counselled and supported by the midwives to remain positive. Participants no.8 and 9 were free to disclose their HIV positive status and participant no. 9 revealed that she is encouraging her friends to test for HIV so that they could get support. The use of condoms is also emphasised and it was reflected to prevent mother to child transmission (MTCT) of HIV during pregnancy and during breastfeeding when the woman has opted for exclusive breastfeeding:

Participant:10 (day5) "Midwives mentioned some infections that are dangerous... HIV things and that with the new things now you can breastfeed even if you are HIV"

positive as long as your baby is given nevirapine syrup and AZT, there, is a lot about HIV that they tell us about."

Participant:8 (day4) "I tested positive and I was told to use a condom during sexual intercourse to prevent mother to child transmission of HIV. If I engage into sexual intercourse there will be no harm instead delivery will be quick."

Participant:8 (day4) "I was advised to eat ARVs regularly, same time every day."

Participant:1 (day1) "Oh your blood will be checked for HIV/ AIDS so that you are given nevirapine and AZT so that your baby will be safe, baby will be protected; HIV will not enter my baby`s blood."

Participant:2 (day1) "At the clinic nurses talk to us about HIV and then if you are found as positive you are given ARVs to protect your baby and your CD4 count is checked."

Participant:9 (day5) "Your HIV status is checked here so that you know if your baby is safe." "Shame at this clinic if you are HIV positive you get support from the nurses .Oh really I find it important to attend this clinic I know everything now about HIV .I encourage even my friends to come and test to get the support."

4.4.1.6 Support consequent to disclosure of HIV status

There was only one participant, no. 8 who reflected that it was important to disclose her HIV status. She was supported by midwives and was advised to use a condom to prevent mother to child transmission of HIV. She was very confident to say that she is strong and healthy and that she is supporting and encouraging her husband to "eat ARVS".

Participant:8 (day 4) "I got support at this clinic .I was told to talk to somebody about my HIV status, now I see no need to hide your HIV status when you are pregnant, you must not be afraid to speak out. I encourage my husband to take his ARVs everyday even at work I encourage everybody to test and start eating the pills early. As you can see I`m strong and healthy because HIV is not going to kill me. I have not started eating ARVs, I eat healthy and condomise."

4.4.1.7 Increased client- midwife relationship

Midwives were seen as having required knowledge needed to assist women throughout pregnancy. This seemed to increase client confidence in the midwife- client relationship. Participant no.5 expressed feelings of trust in midwives' knowledge and expertise. She

indicated that she has accepted their (midwives) interventions more easily than that of the doctors:

Participant:5 (day3) "Midwives are better than doctors. At the clinic it's like a school but doctors hoo... they don't even check you properly. They just say it's one of the things of pregnancy but with clinic they undress you and check you even under neath .There is nothing you can hide and doctors, they only scan you. I don't know about others- doctors".

4.4.1.8 Individualized care and language of choice

Some participants were deprived of basic pregnancy related information because of a language barrier, resulting in a lack of empowerment with the relevant information. Health education was reflected as being delivered in isiXhosa and as a result language of choice is not considered. This is reflected by the following statements:

Participant:5 (day 3) "When you have got funny feeling or I'm dizzy, there is a lot maan as I said some of these things are said in Khosa I don't understand."

Participant:5 (day 3) "Nee, because you feel that others do understand, you are the only one sometimes, ha ha ha.. they laugh though you did not understand what they were talking about, don't bother I hear some of the things."

Participant:9 (day 5) "I come here to make sure that everything is alright and for safety reasons." When being probed to explain "for safety reasons." The response was, "Well I'm not sure I was never told and these lectures were a mixture of predominantly Khosa and few sentences of English".

4.4.2 Obstetric emergencies (problems) that need immediate attention

Table 4.3: Illustration of danger signs of pregnancy

Theme 2	Subthemes
4.4.2 Obstetric emergencies (problems) that need immediate attention	4.4.2.1. Vaginal bleeding
	4.4.2.2. Premature rupture of membranes
	4.4.2.3. Diminished or no foetal movements felt
	4.4.2.4. Painful abdomen /Stomach
	4.4.2.5. Severe frontal headache
	4.4.2.6. Funny feeling and dizziness

It has been highlighted that midwives emphasised the content of obstetric emergencies and danger signs of pregnancy. Most of the five danger signs and symptoms of pregnancy were identified. These danger signs were respectively reflected by participants as continuous headache, painful stomach, breaking of waters, bleeding from the vagina and when the baby does not move.

These danger signs include severe headache, abdominal pain (not discomfort), draining of liquor from the vagina, vaginal bleeding and reduced foetal movements.

4.4.2.1 Vaginal bleeding

All participants were aware of the danger and effect of vaginal bleeding to the life of the unborn baby but they did not know about the precautionary measures they should follow when they have vaginal bleeding. Seven participants reflected on seeking medical help immediately on experiencing any type of vaginal bleeding during pregnancy.

The comments below demonstrate that vaginal bleeding during pregnancy is regarded by participant as one of the most important danger signs that should be reported immediately:

Participant:1 (day 1) “ I was told to report vaginal bleeding and must not wait for my return date and even if it`s in the middle of the night I must get a car to take me to hospital because if I delay my baby will die.”

Participant:2 (day1) “They told me to report when I see blood coming from the vagina”.

Participant:3 (day 2) “ I must come when bleeding”.

Participant:5 (day3) “I must go to the clinic when I see blood coming from the koekie”.

Participant no.6, day 3) “When I see blood coming from the bottom I must take a car to hospital”.

Participant:7 (day 4) "I must come to the clinic if I bleed".

Participant:10 (day5) "Vaginal bleeding, especial me I have got two previous miscarriages before this current pregnancy".

4.4.2.2 Premature rupture of membranes (PROM)

Premature rupture of membranes is the rupture or breaking of the membranes surrounding the foetus during pregnancy before 37 weeks of gestation or before the onset of labour. It emanated that PROM is not overemphasised by midwives as another important obstetric emergency that needs to be reported immediately during the antenatal period. There were only two participants who reflected on the importance of reporting the premature rupture of membranes:

Participant:7 (day4) "If I see something bloody, dark like 'mhm' signs of 'STIs' ja... I must report to the doctor."

Participant:8 (day4) "I was informed to report immediately to hospital when I am draining dark water from the vagina".

There was no clear description of the reason why they should report the rupture of membranes, as well as the implication of PROM to the outcome of pregnancy except participant no.7 who associated dark water with preterm labour and infection:

Participant:7 (day 4) "I was told to report to hospital if I see dark bloodlike thing coming from the vagina because it means I'm starting labour or dirt is coming out".

4.4.2.3 Diminished or no foetal movement felt

Diminished or no foetal movement was another danger sign that was mostly identified to be reported immediately. Participants knew that foetal movement is the best sign of their baby's wellbeing when pregnant and is regarded as a reliable, simple and effective screening for baby's wellbeing. Some participants highlighted the importance of reporting immediately when there is a change in foetal movements but none of them knew how to monitor these movements at home by using a foetal kick count chart. Five participants responded as follows:

Participant:2 (day1) "I must report to hospital if the baby does not move for 2 days."

Participant:3 (day 2) "If my baby does not move, I come to the clinic".

(Participant:5 (day3) "I was told to come to the clinic if my baby stops moving".

Participant:8 (day4)“I must come to hospital when my baby is having little moves”.

Participant:10 (Day5) “If I don` t feel baby`s moves I must see the doctor especially me.. last time I waited for the ambulance and my boyfriend was not at home ,I went to hospital the following day and I was told my baby is dead after scan.”

4.4.2.4 Painful abdomen/stomach

In this study a painful abdomen was reflected as another emergency to be reported but was not associated with labour pains or abortion, nor was it associated with abruptio placenta (continuous pains due to premature separation of the placenta with no resting phase, the abdomen is hard and tender in touch). The following were some of the reflections:

Participant:3 (day2) “I must come to hospital when I have painful abdomen”.

Participant:1 (day 1)“When I feel pain on top of my stomach I must come but they did not tell me why and what is wrong.”

Participant:7 (day4) “When I feel pain on top of my stomach”.

Participant:9 (day5) “When I feel pain on my tummy I must come to the clinic.”

Only one participant associated abdominal pains with premature labour:

Participant:10 (day5) “They told me to come to hospital when I experience painful abdomen as it may be sometimes labor before time.”

4.4.2.5 Severe frontal headache

Severe headache was also identified as another pregnancy related problem that participants reflected to be reported to the clinic.

There is only one participant who reflected on abnormal constant headache and she indicated that she was not told what could be the cause of a severe headache:

Participant:7 (day4)“I was told to report any feeling of abnormal headache and dizziness but I was not told why or maybe I have forgotten.”

4.4.2.6 Funny feeling and dizziness

Only one participant reflected on a funny feeling and dizziness as one of the obstetric emergencies that needs immediate attention .This participant managed to get this information irrespective of the fact that she had a language barrier. She indicated that midwives were using isiXhosa when giving health education. She reflected as follows:

Participant:5 (day 3) "When you have got funny feeling or I'm dizzy, you report, there is a lot maan as I said some of these things are said in Khosa I don't understand."

The implications of vaginal bleeding and diminished foetal movements were identified as the obstetric emergencies that midwives mostly concentrated on when giving health education. In this regard participants were able to reflect and explain the implications of these pregnancy related problems in relation to the outcomes of their pregnancy.

4.4.3 Theme 3

Table 4.4: Illustration of expectations/advices needed to be observed by pregnant women

Theme 3	Subthemes
4.4.3.1 Do's	4.4.3.1.1 Well-balanced diet, fruit and vegetables 4.4.3.1.2 Exercises 4.4.3.1.3 Eat clinic tablets e.g. folic acid
4.4.3.2 Don'ts	4.4.3.2.1 No / limit smoking 4.4.3.2.2 No alcohol and substance abuse

4.4.3.1 Do's

4.4.3.1.1. Well-balanced diet, fruit and vegetables

Quite a number of participants reflected on the importance of eating a healthy diet. They were able to highlight the types and sources of foodstuffs they should get and how the healthy diet facilitates the normal growth of the foetus. Participant no.3 seemed not to understand types and sources of foodstuffs she is expected to eat. She indicated that she was not told by the midwives. This is how participants responded:

*Participant:2 (day1) "Oh... you must eat healthy because you are eating for two."
"Always eat healthy because the baby is taking everything from your blood when you are pregnant."*

Participant:10 (day 5) "One must eat fruit, and 'veggies' that are high in folic acid, yes... green veggies .I also eat these clinic pills called...eh... Folic acid for my baby to grow."

*Participant:3 (day2) "I was told to eat healthy food but they did not specify which one.
"*

Participant: 2 (day1) "They told me to grow green vegetables like cabbage, spinach and must have chickens so that I eat eggs."

Participant:7 (day4) "When you are pregnant you must eat healthy diet, meat and eggs."

Participant:8 (day4) "When you are pregnant eat meat".

Participant:1 (day1) "I was told to eat nutritious diet but with this pregnancy I am craving for sour milk".

4.4.3.1.2 Exercises

One participant reported the importance of doing antenatal exercises. She claimed that she has never been exposed to the technique of doing exercises because during her first visit she arrived late at the clinic. Most of pregnant women regard antenatal exercises as just done for fun. They come late to avoid this session and some are delayed by the use of public transport. This participant reflected as follows:

Participant:3 (day2) "Oh, I must exercise but I missed the demonstration of exercises. During the first visit I came late and even today I came late because I'm lazy to wake up early in the morning."

Participant:6 (day3) "Oh we are doing drills; here we are playing and dancing whilst waiting for doctors."

4.4.3.1.3 Eat clinic tablets e.g. folic acid

Two participants reported that they were advised by midwives to take the medication prescribed to them by the doctor/sister, since the medication would help facilitate foetal growth. There was nothing mentioned about the effects of these tablets on the pregnant woman's health. They only mentioned that these tablets help in the proper growth and development of their babies:

Participant:2 (day 1) "I was told to swallow clinic tablets every day because if I do so my baby will grow normal."

Participant:7 (day4) "I must eat clinic tablets for my baby to grow."

4.4.3.2 Don'ts

4.4.3.2.1 No / limit smoking

Participants also reflected on harmful social actions they should limit during pregnancy by mentioning alcohol and smoking. All participants conveyed that smoking is dangerous to both mother and baby and were told that they must reduce the number of cigarettes or should stop smoking. However, participants were not informed about the negative effects of smoking on the foetus. These participants were only informed that due to their smoking they could give birth to small for date babies.

Participant:1 (day1) "I must not smoke during pregnancy because smoking will cause chest problems and that will cause harm to my baby."

Participant:4 (day 2) "If I smoke my baby will be born small".

4.4.3.2.2 No alcohol and substance abuse

One participant highlighted alcohol and substance abuse as harmful to the growth and development of the foetus and that "milestones" will be slow and mentally the baby will be retarded. Participant no.1 reflected by saying:

Participant:1 (day1) "Alcohol abuse is not right for the baby because milestones will be delayed; the baby will be a slow learner and mentally will not be alright."

4.5 DISCUSSION AND SUMMARY

The overall aim of this study was to explore perceptions and experiences of pregnant women regarding health education rendered by midwives during the antenatal period. Data collected during interviews were analyzed into categories, themes and subthemes which described the perceptions and experiences of pregnant women regarding health education given during the antenatal period.

The findings indicated that, health education was given to pregnant women at the institution under study. Midwives however, emphasised non-pregnancy related complications, such as HIV/AIDS and its management. In addition, they concentrated on the implications of vaginal bleeding and diminished foetal movements. A deficit existed in educating participants about other obstetric emergencies, such as the implication of severe constant headaches and the premature rupture of membranes and basic antenatal care, such as the importance of antenatal exercises, personal hygiene and breastfeeding.

Antenatal exercises are the building blocks for posture and are important to prepare the woman to be strong physically in preparation for labour and breastfeeding. Pregnant women perceived doing antenatal exercises just for fun. They came late under the pretence of waking up late and that they were delayed by public transport. Moreover, this reflects that midwives do not emphasise the importance of doing antenatal exercises.

All participants reflected on smoking as dangerous to the mother and baby but seemed not to know the effects of nicotine to the life of the unborn baby. Nicotine crosses the placental barrier and causes infarcts on the maternal surface of the placenta and may cause placental insufficiency and intra-uterine growth restriction. Babies are born small for dates because of the lack of nutrients whilst still in utero.

It is commendable for the midwives because all participants displayed knowledge and they reflected well in explaining the effects of alcohol on the unborn babies.

Quite a number of participants reflected on the importance of eating a healthy diet that, it improves their nutritional state to fulfill foetal demands to prevent placental insufficiency.

4.6 CONCLUSION

In this chapter the results were presented and discussed. The data was transcribed and categorized according to Tesch' approach. Three categories, themes and subthemes were formulated from the transcribed data. The research question was adequately answered regarding the perceptions and experiences of pregnant women regarding health education rendered by midwives during the antenatal period.

In chapter 5 limitations of the study, the conclusions and suggested recommendations are described.

CHAPTER 5: DISCUSSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapter dealt with data analysis and a brief discussion of the results. The findings will now be discussed and be related to the literature review. The aim of this chapter is to make conclusions and recommendations based on the findings to assist midwives in optimizing health education that is given to pregnant women during the antenatal period.

5.2 CONCLUSIONS BASED ON THE RESEARCH OBJECTIVES

The goals and specific objectives set for this study were to explore the experiences and perceptions of pregnant women regarding health education given during the antenatal period.

The objectives set for this study were to:

- explore the content of the health education given to pregnant women by midwives during the antenatal period
- determine whether the health education offered by midwives is understood by pregnant women
- determine whether information regarding Health Education during antenatal period is applicable and is used by pregnant women.

These objectives were, for the purpose of this study pursued by asking three main questions and probing questions were used to gather more information from the participants to clarify misinterpretations:

- The first question explored the importance of attending antenatal clinic
- The second question explored the problems that women must report immediately at the clinic or hospital
- The third question explored the 'do`s and don`ts` during pregnancy.

5.2.1 Importance of attending antenatal clinic

The findings of this study showed that antenatal attendance was regarded as important by participants. Participants appreciated care given by considerate and knowledgeable midwives hence they indicated that they left the clinic being well- informed about their state of health and that of their unborn babies. Participants indicated that their unborn babies were monitored by the midwives in order to detect abnormalities early, to monitor foetal growth, on-going health education and HIV counselling and that testing was encouraged. *"Oh yes they teach each and every time you come here you are told that your baby is healthy and growing well and how is*

my body working when I am pregnant.” (Participant no.2, day 1), (Table:4.2, subtheme 4.2.1.1.).

In this regard continuous support of participants by midwives improved client- midwife relationships, self- care reliance and thus promoted Orem`s theory of Self Care Agency as a human`s ability or power to engage in self-care. Participant no.8 reflected: “ *I got support at this clinic .I was told to talk to somebody about my HIV status, now I see no need to hide your HIV status when you are pregnant, you must not be afraid to speak out. As you can see I`m strong and healthy because HIV is not going to kill me”.* (Table: 4.2, subtheme 4.2.1.6).

Participants` motivation was enhanced further by promoting breastfeeding in the context of HIV. “*Midwives mentioned some infections that are dangerous... HIV things and that with the new things now you can breastfeed even if you are HIV positive as long as your baby is given nevirapine syrup and AZT, there, is a lot about HIV that they tell us about.”* (Participant no.10, day 5). (Table: 4.2, theme 4.2.1).

Participants were advised to keep themselves healthy and clean but failure not to keep themselves healthy and clean had consequences which were not explained as substantiated by Singh (2011:43) that during pregnancy personal hygiene must be of utmost importance because improper hygiene can lead to infections which the baby can acquire through the mother, most times through amniotic fluid (liquor amnii).

Participant no. 8 subtheme 4.2.1.1 quoted: “*Ok, this is my first pregnancy I did not know what to expect when labour is starting and how old was my baby when I came here. I know all those things now and how I should keep myself and my baby clean.*” Information sharing by the midwives therefore, plays a major role in the prevention and management of pregnancy related conditions. According to Orem`s theory, the pregnant woman for the purpose of this study, developed a capacity for self-care knowledge, a potential for developing deliberate actions to be able to perform beneficial actions (George, 2002:109). This statement is echoed by Pearson, Vaughan and Fitzgerald (2005:92) that pregnant women have responsibilities and rights to care for themselves in order to maintain their health, life and well-being.

5.2.2 Problems that you must report immediately at the clinic or hospital

These problems or danger signs include severe headache, abdominal pain (not discomfort), draining of liquor from the vagina, vaginal bleeding and reduced foetal movements (Hofmeyer & Lamacraft, 2007:27 and Kaur, Behera, Gupta & Verma, 2009:129).

Most of the five danger signs and symptoms of pregnancy were identified. As reflected (table 4.3, theme 4.2.2) all participants were aware of the danger signs and effect of vaginal bleeding

to the life of the unborn baby but they were not informed of precautionary measures they should follow when they have vaginal bleeding.” *I was told to report vaginal bleeding and must not wait for my return date and even if it’s in the middle of the night I must get a car to take me to hospital because if I delay my baby will die.*” (Participant no.1, day 1), (Table: 4.3, subtheme 4.2.2.1).

The SANC regulation of R2488 of October 1990, rule 4 stipulates that a registered midwife shall keep clear and accurate records and of all acts, including emergency acts, performed in connection with a mother and child. Rule 10 of the said regulation also stipulates that in the event of any of the following illnesses, abnormalities or complications occurring during pregnancy, labour or the puerperium or in the child, the registered midwife shall, subject to the provisions of sub regulation (4), with the consent of the mother, call in a medical practitioner or refer the patient to a medical practitioner. The pregnant women notwithstanding the said regulations were not informed of the precautionary measures to be taken to control excessive vaginal bleeding that may result in the death of the foetus before the woman reaches the hospital (Kaur et al., 2009:129). The lack of information on the precautionary measures of controlling and preventing excessive bleeding was identified as a deficit that may cause maternal and foetal deaths. Only two participants reflected on premature rupture of membranes but they displayed no clear description of the reason why they should report rupture of membranes except one participant who associated “dark water from the vagina” with preterm labour and infection. *“I was told to report to hospital if I see dark bloodlike thing coming from the vagina because it means I’m starting labour or dirt is coming out.”* (Participant no. 7, day 4), (Table 4.3, theme 4.2.2.2).

Participants needed self-care guidance, teaching and support with regard to adverse effects of premature rupture of membranes that may affect the health of both mother and baby. Premature rupture of membranes may lead to prolapse of the umbilical cord depriving the baby of oxygen and food (Lieman, Brumfield, Carlo & Ramsey, 2005:43).

Participants knew that foetal movement is the best sign of their baby’s wellbeing during pregnancy and is regarded as a reliable, simple and effective screening for baby’s wellbeing (Navot, Yaffe and Sadovsky, 2007:19). *“If I don’t feel baby’s moves I must see the doctor especially me.. last time I waited for the ambulance and my boyfriend was not at home, I went to hospital the following day and I was told my baby is dead after scan.”* (Participant no.10, day 5), (Table 4.3, theme 4.2.2.3).

Painful abdomen was reflected by participants and was not associated with labour pains or abortion, nor was it associated with abruptio placenta. *“When I feel pain on top of my stomach*

I must come but they did not tell me why and what is wrong.” (Participant no. 1, day 1), (Table 4.3, theme 4.2.2.4).

Abdominal pain in pregnancy can be due to a number of normal pregnancy changes, such as the enlarging uterus, the baby's position or movement and Braxton-Hicks contractions but it can be a serious problem if it is associated with spotting, bleeding, fever, chills, vaginal discharge, faintness, discomfort while urinating, or nausea and vomiting, or if the pain doesn't subside after several minutes of rest (James, 2004:5).

Severe frontal headache was identified as not regarded as dangerous by participants whereas headaches may be stress related and can be relieved by relaxation techniques and more often by moderate exercises. The feeling of severe headache may be a sign and symptom of hypertension (Sellers, 2009: 246). There was only one participant who reflected on an abnormal constant headache and she indicated that she was not told what will be the cause of a severe headache.

“I was told to report any feeling of abnormal headache and dizziness but I was not told why or maybe I have forgotten.”(Participant no. 7, day 4), (Table: 4.3, theme 4.2.2.5).

Only one participant reflected on a funny feeling and dizziness as one of the obstetric emergencies that need immediate attention. In early pregnancy dizziness is associated with circulatory demands of two bodies (mother`s and foetus`s) or as a sign of hypertension in pregnancy (Mayo, 2011: 1). Participant no.5 (day 3), (Table 4.3, theme 4.2.2.6) managed to obtain information on feeling funny and dizziness despite the fact that she had a language barrier. She indicated that midwives were using isiXhosa when giving health education. There was no provision in place for those who do not understand isiXhosa. It was identified that these women were lacking the vital information that is important for their health and that of the unborn baby. *“When you have got funny feeling or I`m dizzy, you report, there is a lot maan as I said some of these things are said in Khosa I don`t understand”*

It can be concluded that midwives ignored the aspect of multilingualism and their disregard for the women`s rights of their language of choice as stipulated in the constitution of South Africa (Act no. 108 of 1996:13).

5.2.3 ‘Do`s and don`ts` during pregnancy

‘Do`s and Don`ts` were analysed as being imposed upon participants when health education was given. Participants indicated that they were just told what to do and what not to do. Participants were just given statements without explaining why they must do or not do certain activities. Participants were thus identified as lacking conscientious application of critical

thinking and evidence-based decision-making. They were deprived of developing a potential for learning and beneficial actions that according to Orem's theory of self-care and of promoting self-care reliance (George, 2002:110).

5.2.3.1 Diet in pregnancy

A number of participants reflected on the importance of eating a healthy diet (Table: 4.4, theme: 4.2.3.1). They were able to highlight the types and sources of foodstuffs they should purchase and how the healthy diet facilitates the normal growth of the foetus. Midwives gave minimal education with regard to available and affordable sources of healthy diet considering the socioeconomic status and unemployment of participants around this area of study. *"One must eat fruit, and 'veggies' that are high in folic acid, yes... green veggies .I also eat these clinic pills called...eh... Folic acid for my baby to grow."* (Participant no.10, day 5), (Table:4.4, subtheme 4.2.3.1.1).

A well-balanced diet improves pregnant women's nutritional status and fulfills foetal demands to prevent placental insufficiency. Placental insufficiency is common in early pregnancy due to morning sickness that causes maternal malnutrition (Fraser et al., 2006:210).

5.2.3.2 Importance of exercises

One participant reported the importance of doing antenatal exercises. She indicated that she has never been exposed to the technique of doing exercises because during her first visit she arrived late at the clinic. *"Oh, I must exercise but I missed the demonstration of exercises. During the first visit I came late and even today I came late because I'm lazy to wake up early in the morning."* (Participant no.3 ,day 2), (Table: 4.4, subtheme 4.2.3.1.2).

In this regard some pregnant women, who arrived late at the clinic, missed important demonstrations of antenatal exercises during the first visit that are vital to strengthen their bodies in preparation for labour. Exercises are important because premature bearing down is prevented during labour and it is the building block of good posture. Pelvic tilting also strengthens the abdominal and back muscles, decreasing back strain and fatigue (Kegel, 2010:3-6).

Two participants reported that they were advised by midwives to take the medication prescribed to them by the doctor or 'nurse', since the medication would help facilitate foetal growth. *"I was told to swallow clinic tablets every day because if I do so my baby will grow normal"*. (Participant no.2, day 1), (Table: 4.4, subtheme 4.2.3.1.3).

Midwives failed to explain the actual effect and side effects of these tablets on the pregnant woman's health. Hope (2007:8) recommended that an overdosage of iron tablets should be

prevented during pregnancy. They can predispose to pregnancy induced hypertension (pre-eclampsia) and thus lead to placental insufficiency and intra-uterine growth restriction. Early consumption of folic acid during pregnancy reduces the risk of serious neural tube defect during the developmental stages of the foetus. Midwives only mentioned that these tablets help in the proper growth and development of their babies (Table: 4.4 theme 4.2.3.1).

5.2.3.3 Harmful social habits

Despite the fact that the midwives indicated that smoking will harm the baby they failed to explain the specific effects of smoking on the foetus, such as giving birth to small for date babies. Smoking cigarettes causes too many complications, in that babies are born prematurely or they are born as still births due to infarcted maternal placental surface (Sellers, 2003:243; Woolston, 2011: 5).

Only one participant highlighted alcohol and substance abuse as harmful to the growth and development of the foetus and that milestones will be slow and mentally, the baby will be retarded. *“Alcohol abuse is not right for the baby because milestones will be delayed; the baby will be a slow learner and mentally will not be alright.”*(Participant no 1, day 1), (Table: 4.4, subtheme 4.2.3.2.2). This statement indicates that participants were informed about the harmful effects of alcohol consumption to the life of the baby. Alcohol does cross the placental barrier and destroy the growing organs of the unborn child during the developmental stage (Sellers 2003:231-232).

In conclusion, the content of health education given to pregnant women by midwives during the antenatal period was applicable with regard to pregnancy related information, complications, expectations and avoidance of harmful social habits.

The health education offered by midwives was understood by pregnant women but given with minimal explanations of basic antenatal aspects. Consequently, due to a lack of self-care guidance and teaching, aggravated by language barriers the information was partially used by pregnant women.

Midwives were perceived by pregnant women as knowledgeable, supportive and seen as change agents. However, findings revealed that there was a deficit in offering an in-depth basic antenatal care and precautionary measures to be followed when pregnant women encountered obstetrical emergencies.

5.3 RECOMMENDATIONS

As described in chapter one this study was pursued as a result of high maternal and infant mortality in the Eastern Cape Province. According to Orem's theory of self-care, a deficit of self-care agency and supportive educational information to pregnant women given by midwives exists. A deficit in the basic information sharing about pregnancy outcomes and related complications were identified.

The recommendations, grounded in the findings of the study are presented under headings, according to the subthemes that emerged from the themes.

5.3.1 Importance of attending antenatal clinic

5.3.1.1 Breastfeeding

It is recommended that breastfeeding be promoted continuously because of the high infant mortality rate in the Eastern Cape Province that is predominantly due to malnutrition. This is supported by the provincial overview of the cause of maternal and infant mortality that was found to be as a result of poor antenatal care and the lack of health education (*Towards Equal Access to Better Health Care for All, 2007:4*).

Exclusive breastfeeding is recommended, that is, the baby receives only breast milk and no other liquids or solids, including water. Community involvement and health care personnel should support breastfeeding to facilitate continuity in post-delivery and if women are willing to continue breastfeeding they can do so for twelve months. Exclusive breastfeeding prevents infant malnutrition and mother to child transmission of HIV/AIDS (*Towards Equal Access to Better Health Care for All, 2007:4*).

5.3.1.1.1 Use of media campaigns and magazines in promoting breastfeeding

It is recommended that a variety of methods be used when the subject matter is presented to women, particularly those methods which allow open communication and participatory learning in the form of awareness campaigns, magazines, demonstrations, group discussions taking into account the age group to encourage active participation as supported by Bond, Heidelbaugh, Robertson, Alio and Parker (2010:230).

5.3.1.1.2 Involvement of support persons

Some families around this area of study live in the form of a nuclear family or cohabitation where there are no elders to help guide the pregnant woman. It is therefore recommended that partners or husbands be involved to support women before, during and beyond pregnancy, including paternal support to promote exclusive breastfeeding. This is supported by Orem's educative/supportive nursing systems that if a client does not meet the self-care needs

alternatively a relative or friend may be helped by a nurse to give dependent care to a person in need who still needs information and advice regarding some changes in lifestyle (George, 2002: 108).

5.3.1.2 Personal hygiene

Personal hygiene should also be emphasised by midwives because pregnant women are prone to infections due to hormonal changes of pregnancy that affect the urinary tract and tend to slow down the flow of urine. The progesterone relaxes the smooth muscles of the bladder, thus promoting stasis of urine that causes cystitis. Therefore, women should be encouraged to have a bath, comb their hair, brush their teeth and change clothing, especially their panties once daily to prevent further ascending infections (Sellers, 2003:1123).

5.3.1.3 Early detection of abnormalities and treatment

Early detection of abnormalities during pregnancy is important because some women commence pregnancy without difficulties but tend to develop abnormalities as pregnancy advances. It is vital for these abnormalities to be identified early to save the life of both the mother and the baby. Bloom (2010:i) emphasised that early detection of abnormalities means educating pregnant women of warning signs to watch for and report immediately. Kilpatrick and Garite (2006:13) substantiate that women should be empowered by being able to look out for the abnormalities and /or danger signs and report it immediately to the clinic or hospital. This may encourage women's self-reliance in identifying signs early and report encountered pregnancy related problems.

5.3.1.4 Growth monitoring of the foetus

Clients should be encouraged to book (register early) so that the normal growing pattern is followed from 12 weeks of missing menstruation as substantiated by Pattison (2004:7) and described in the National guidelines for Maternity care in South Africa (2007:19). Monitoring the baby's growth is important during pregnancy. If growth is poor then this should be identified as soon as possible, because delay might result in the baby's growth restriction and death in severe cases (Russell et al., 2005:4).

5.3.1.5 HIV testing and treatment (ARVS)

As advised by Moodley, Pather, Chetty and Ngaleka (2009:1255) in the *Prevention of Mother to Child Transmission*, the initial information session on HIV and its transmission should be given in a group. Those who require testing should meet with a midwife for a one on one individual information session so that each woman should be informed of the routine HIV testing procedure.

Midwives should encourage formation of support groups in the communities to support and welcome the infected and the affected. Women should be encouraged by the midwives to join the Treatment Action Campaigns (TAC) and non-governmental organizations that support and promote HIV/AIDS treatment (Pearson et al., 2005:95). This creates a positive pregnancy experience and prevents problems such as depression. Pregnant women should be encouraged during the first visit through health education to undergo a HIV/AIDS test in order to start on a fixed dose combination (FDC) of antiretroviral drugs to prevent mother to child transmission of HIV (*Antiretroviral treatment guidelines, 2013:8*).

5.3.1.6 Increased client- midwife relationship

Midwives were perceived by participants as nursing agents because they possess the required knowledge needed to assist women throughout pregnancy by helping them to bring about changes where needed in their health status as pregnant women. This seemed to increase client confidence and trust in the midwife- client relationship.

It is therefore recommended that midwives, as further advised by Condie (2012:3) should:

- Continue displaying their expertise and knowledge when carrying duties to gain confidence and a trusting relationship by equipping women with information in identifying pregnancy related problems and prompt management of these problems.
- Build a trusting relationship with their clients, work with them to make informed choices about their care and be accessible on-call twenty four hours for seven days of the week
- Create a two-way discussion with good understanding of each other. It does not only help the woman to know the possible problems that she may encounter and when to take appropriate action, but it also enhances a trusting relationship with the midwife. Additionally, such a two-way communication helps the woman to feel more comfortable and to freely express her worries and needs to the midwife.
- Use non-medical terminology throughout, which the pregnant woman can understand and check frequently that she has really understood.
- Encourage the pregnant woman to ask questions, express her needs and concerns, and seek clarification of any information that she does not understand.
- Maintain respect and tolerance for wrong beliefs. However, this does not mean accepting that it cannot be changed. Sensitivity and tolerance are two of the most important qualities of an effective counsellor as supported in Orem`s theory of Beliefs and Values that a person has the right and ability to meet self- care needs except when her ability is some way compromised (George , 2002:112).

5.3.1.7 Individualized care and language of choice

Individualized health education should be given according to the clinical manifestations identified on assessment.

It is recommended that in this institution under study different languages should be used during health education, i.e. isiXhosa, English and Afrikaans so that the vital information about the health of both the mother and the baby is disseminated across the various languages spoken in the environment. The health education programme and individualized information sessions must be programmed by considering the woman's language of choice. The Bill of Rights as described in the Constitution of South Africa (Act no. 108 of 1996:13) states that individuals have the right to receive education in the official language of choice at a public health institution.

5.3.2 Problems that women must report immediately at the clinic or hospital

5.3.2.1 Vaginal bleeding

Midwives should emphasise all obstetric emergencies that pregnant women would encounter throughout their pregnancy. Clear explanations should be given about each complication and the required precautionary measures to be taken, such as to avoid inserting tampons and sexual intercourse when experiencing vaginal bleeding to prevent further excessive bleeding. Women should be encouraged to wear sanitary pads to monitor the amount of bleeding and should bring them to hospital for the doctor to evaluate. This is substantiated by Gabbe, Niebyl and Simpson (2007:9). All pregnant women experiencing bleeding should be referred to a doctor.

5.3.2.2 Premature rupture of membranes (PROM)

It is also recommended that women should be advised to report to the health centre once they observe a gush of water coming from the vagina which is followed by a continuous leakage of waters as this may cause umbilical cord prolapse leading to foetal compromise and foetal death (Mercer, 2003:2).

5.3.2.3 Diminished or no foetal movements felt

As advised by Navot et al. (2007:176) it is recommended that women should be educated to monitor their baby's well-being at home. They should be given information on how to monitor the foetal movements at home using foetal kick charts. In this regard the woman is expected to lie on her side for an hour, on left lateral position with a watch, kick chart and pen next to her bed. This is done after meals when the baby is presumed to be active, each day, same time. The woman is expected to plot on the chart each foetal movement / kick either by making a tick or cross. After an hour she should stop and then she is expected to bring this plotted

chart to the clinic for the doctor to see the number of foetal kicks per hour. For those who are illiterate they should use beans or a stone to be placed in a bottle, that is, one bean per kick is placed in a bottle. The midwives should emphasise the importance of proper counting of these kicks and the implication of improper counting to the life of the baby.

5.3.2.4 Painful abdomen

Women experiencing any abdominal pain should seek medical help to exclude preterm labour or abortion. Sometimes abdominal pain if severe may be associated with placenta abruption. James (2004:5) recommends that pregnant women experiencing abdominal pains should not try to diagnose themselves but seek medical help immediately for further investigations.

5.3.2.5 Severe frontal headache

Headaches include those that are stress related and can be relieved by relaxation techniques and more often by moderate exercises. Severe headache is associated with raised blood pressure (hypertension) (Sellers, 2003: 1165)..

Pregnant women should, during their first visit, be provided with information of the dangers of hypertension. The pregnant women must be empowered with various common causes of headaches during pregnancy. Women should therefore be advised to relieve headaches by drinking lots of fluids and eating food with high calories per day and should try to avoid bad smells commonly caused by noxious substances as substantiated by Mayo (2011:7). If a headache is not relieved and is associated with dizziness and visual disturbance women should be advised not to take medication that is not prescribed by the doctor but must seek a midwife or medical help because continuous severe headache is usually associated with high blood pressure. This shows that the brain is affected due to severe vasospasms and the consequent rupture of blood capillaries of the brain tissue and of various vital organs like the kidneys and if neglected may lead to eclampsia (Sellers, 2003: 1166).

5.3.2.6 Funny feeling and dizziness

Women who claim to experience a funny feeling should seek medical help to investigate the possible cause of the feeling.

Women should be advised, when having spells of dizziness as described by Mayo (2011:1) to:

- lie down as soon as they start to feel lightheaded
- elevate feet to increase blood flow to the brain

- sit down and bend as far forward as they can, putting the head between knees, if possible
- kneel on one knee and bend forward as if they were tying the shoe until the spell passes if there's no place to lie down or sit
- eat protein at every meal to maintain stable blood-sugar levels
- make sure they are eating well during pregnancy — eat several small meals throughout the day
- carry healthy pregnancy snack options like raisins, a piece of fruit or a couple of whole-wheat crackers
- report to the clinic or doctor for further investigations if dizziness or lightheadedness persists (Mayo, 2011: 1).

5.3.3 Expectations (“do’s and don’ts”) during pregnancy

According to Orem`s educative/supportive nursing systems, optimum independent well-being should be ensured through proper education and support (Pearson, 2005: 95). Women should be empowered to enhance their health and that of their babies during pregnancy to prepare for successful labour, puerperium and breastfeeding. They must be encouraged to:

5.3.3.1 *Eat well-balanced diet*

A well-balanced diet is recommended to improve the woman’s nutritional state and to fulfil foetal demands in order to prevent placental insufficiency as supported by Fraser et al. (2006:210). The growing baby gets all its nourishment from its mother across the placental barrier through the umbilical cord.

As recommended by Roth (2011:1) pregnant women need to eat more protein. Lean meats, low-fat cheeses and yogurt are a good source of protein. Milk, eggs, cheese, broccoli and salmon assist in providing 1 000 mg of calcium daily. Vitamin C required during pregnancy could be obtained through citrus fruits, peppers and strawberries. Considering the socioeconomic status and religious beliefs of most pregnant women around the area of study, affordable sources of food stuffs should be encouraged, such as chicken livers, beans, spinach and cabbage. They should also be advised to grow their own vegetables.

5.3.3.2 *Exercise*

Exercise is important during pregnancy especially deep breathing and pelvic tilting.

Midwives should demonstrate the technique of doing exercises, including regular exercise classes for pregnant women and should pay special attention to strenuous exercises that may

aggravate pregnant women`s medical conditions (Kegel, 2010: 6). The importance and the significance of antenatal exercises to the life of the unborn baby should be emphasised by the midwives throughout pregnancy.

5.3.3.3 *Supplements during pregnancy*

It is recommended that the effects and the importance of taking these tablets be explained and to encourage compliance. Folic acid is given to prevent congenital abnormalities like neural tube defects. Roth (2011:ii) recommends that folic acid is crucial to prevent babies from developing neural tube defects. A dosage of 600 to 800 mcg may protect the foetus against birth defects and malnutrition. Thus, it is recommended that pregnant women should be encouraged to take these tablets as prescribed but avoid overdosage to facilitate normal development of the foetus.

5.3.3.4 *Social habits: Smoking, substance and alcohol use during pregnancy*

As echoed by Woolston (2011:5) & Welch (2011:i) the midwives should emphasise and explain in simplified language the dangers of nicotine, substance abuse and alcohol on the health of the mother and the baby. Health education could be enhanced through:

- The use of advertisements on cigarette packages, alcohol bottles, posters and articles in popular magazines. Issuing of magazines and booklets in the client`s specific language that are understandable to them which highlights the dangers of smoking, substance and alcohol use during pregnancy. These should be taken home as reading matter for the women.
- Videos and DVDS in the clinic to give special talks to pregnant women whilst waiting to be treated. This may also assist families with the required information when accompanying their relative (farr, Witte, Jarato & Menard,2005:225).

5.3.4 *General recommendations*

The general recommendations by the researcher for the institution under study are that health promotion and information sharing should involve and include:

- Husbands and influential people as partners to facilitate the support of pregnant women in the communities
- Consideration of cultural beliefs, values and the use of language of choice by health workers when rendering health education
- The use of simple terms that are understandable to the clients
- The use of the media and awareness campaigns.

5.3.4.1 Use of media

The media is a powerful communication medium which should be utilized for various means of information targeted at the pregnant woman. The use of television, documentaries, newspapers and magazines would facilitate in disseminating information to pregnant women and the community at large.

5.3.4.2 Health care workers

- Specific nurses should be trained to give health education on important basic antenatal information through group discussions and individual interventions to avoid rush and pressure caused by time to many women who attend the clinics.
- Information should be disseminated by the use of videos and television programmes.

5.4 RECOMMENDATIONS FOR FURTHER RESEARCH

Further research is recommended to explore the “Effects of socio-cultural factors on health education given during pregnancy.” It is also recommended that this research study be conducted, specifically, in primary health care clinics.

5.5 LLIMITATIONS

Burns and Grove (2005:741) describe limitations as “theoretical and methodological restrictions in a study that may decrease the generalizability of the findings. A qualitative research approach was applied which limits generalizability of the findings. The study only focused on the experiences and perceptions of pregnant women regarding health education given during the antenatal period at one health facility. It excluded other institutions and surrounding health centres offering antenatal health care services.

5.6 CONCLUSION

The overall aim of this study was to explore experiences and perceptions of pregnant women regarding health education rendered by midwives during the antenatal period. The results indicated that the content of health education given to pregnant women by midwives during the antenatal period was applicable, partially understood and used by pregnant women due to the lack of self-care guidance and teaching which was aggravated by the language barrier. There was minimal explanation of basic antenatal aspects that according to Orem’s theory of self-care and self-reliance, may lead to a deficit in decreasing perinatal and maternal mortality rates in the Eastern Cape.

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Annexure A: Ethics approval



UNIVERSITEIT-STELLENBOSCH-UNIVERSITY
jou kennisvennoot - your knowledge partner

Approval Notice New Application

12-Jul-2012

Mahlangeni, Z S

Ethics Reference #: S12/05/136

Title: Experiences and perceptions of pregnant women regarding health education given during the antenatal period

Dear Ms Z Mahlangeni

The **New Application** received on **18-May-2012**, was reviewed by members of **Health Research Ethics Committee 1** via Expedited review procedures on **11-Jul-2012** and was approved.

Please note the following information about your approved research protocol: Please remember to use your **protocol number (S12/05/136)** on any documents or correspondence with the REC concerning your research protocol.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note a template of the progress report is obtainable on www.sun.ac.za/rds and should be submitted to the Committee before the year has expired.

The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number projects may be selected randomly for an external audit.

Translation of the consent document in the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372

Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of

Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South

African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel: +27 21 400 3981). Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research. For standard REC forms and documents please visit: www.sun.ac.za/rds If you have any questions or need further help, please contact the REC office at 0219389657.

Sincerely,

Franklin Weber

Ethics Reference #: S12/05/136

Title: Experiences and perceptions of pregnant women regarding health education given during the antenatal period

Protocol Approval Period: **11-Jul-2012 -11-Jul-2013**

Included Documents:

Declaration

Protocol

Consent

Checklist

CVs

Application

Synopsis

REC Coordinator

Health Research Ethics Committee 1

Investigator Responsibilities

Protection of Human Research Participants

Some of the responsibilities investigators have when conducting research involving human participants are listed below:

1. Conducting the Research. You are responsible for making sure that the research is conducted according to the REC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research.
2. Participant Enrollment. You may not recruit or enroll participants prior to the REC approval date or after the expiration date of REC approval. All recruitment materials for any form of media must be approved by the REC prior to their use. If you need to recruit more participants than was noted in your REC approval letter, you must submit an amendment requesting an increase in the number of participants.
3. Informed Consent. You are responsible for obtaining and documenting effective informed consent using **only** the REC-approved consent documents, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least five (15) years.

4. Continuing Review. The REC must review and approve all REC-approved research protocols at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the REC approval of the research expires, **it is your responsibility to submit the continuing review report in a timely fashion to ensure a lapse in REC approval does not occur**. If REC approval of your research lapses, you must stop new participant enrollment, and contact the REC office immediately.
5. Amendments and Changes. If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of participants, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the REC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written REC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.
6. Adverse or Unanticipated Events. Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research related injuries, occurring at this institution or at other performance sites must be reported to the REC within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the REC's requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch University Health Ethics Committee Standard Operating Procedures www.sun025.sun.ac.za/portal/page/portal/Health_Sciences/English/Centres%20and%20Institutions/Research_Development_Support/Ethics/Application_package All reportable events should be submitted to the REC using the SAE Report Form.
7. Research Record Keeping. You must keep the following research related records, at a minimum, in a secure location for a minimum of fifteen years: the REC approved research protocol and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the REC

8. Reports to MCC and Sponsor. When you submit the required annual report to the MCC or you submit required reports to your sponsor, you **must** provide a copy of that report to the REC. You may submit the report at the time of continuing REC review.
9. Provision of Emergency Medical Care. When a physician provides emergency medical care to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognized as research nor the data used in support of research.
10. Final reports. When you have completed (no further participant enrollment, interactions, interventions or data analysis) or stopped work on your research, you must submit a Final Report to the REC.
11. On-Site Evaluations, MCC Inspections, or Audits. If you are notified that your research will be reviewed or audited by the MCC, the sponsor, any other external agency or any internal group, you must inform the REC immediately of the impending audit/evaluation.

Annexure B: Ethical approval from the Department of Health

Ethics Committee: E. L HOSPITAL COMPLEX

Postal Address :

C/o East London Health Resource Centre
PO Box 12882
Amalinda
5252
Telephone : 043 -709 2032

Physical Address :

Cheltenham Road
East London
5201 South Africa

Fax no.: 043 - 7092386

20th August 2012

Z S Mahlangeni
7 Harmony Road
Saxilby
East London

Dear

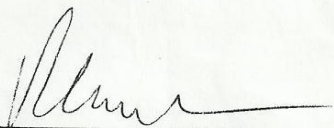
RE: Experience and perceptions of pregnant women regarding health education given during the antenatal period

We acknowledge receipt of the above mentioned proposal.

Having gone through your proposal, the committee has no ethical problems noted.

Please be advised that the committee has granted you the consent to do the research.

Yours sincerely



**Dr P Alexander – Chairman Region C Ethics Committee
Ophthalmologist EL Hospital Complex**

Annexure C: Participant information leaflet and consent form

TITLE OF THE RESEARCH PROJECT:

Experiences and perceptions of pregnant women regarding health education given during the antenatal period

REFERENCE NUMBER: S12/05/136

PRINCIPAL INVESTIGATOR: Zukiswa S. Mahlangeni

ADDRESS: 7 Harmony road Szxilby East London

CONTACT NUMBER: 072328899 / 0437092173/ 0437414586

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study staff or doctor any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the Health Research Ethics Committee (HREC) at Stellenbosch University and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?

The study will be conducted at East London Hospital Complex Frere Hospital Site at maternity unit antenatal clinic. A total number of ten (10) pregnant women will be approached to participate in the study. The overall aim of this study is to explore experiences and perceptions of pregnant women regarding health education rendered by midwives during the antenatal period.

A qualitative approach with a descriptive design will be applied.

The population will be pregnant women who have attended antenatal clinic for the second time irrespective of the number of pregnancies (gravid) and age.

Inclusion criteria for this study will be all pregnant women coming for the second time for antenatal care services in 2012.

Data will be collected through unstructured interviews with individual participants using an interview guide.

The interviews will be conducted in Xhosa and English by the researcher herself.

A digital tape recorder will be used to record the interviews. Interviews will be conducted at the institution's antenatal clinic seminar room.

The sample will be chosen from the total population by means of convenience sampling. Names of pregnant women will be selected from the clinic attendance register using systematic random sampling.

Why have you been invited to participate?

You have been chosen because you are coming for the second time to the clinic and health education is recorded as has been given at registering period (first visit).

The researcher is interested to determine whether health education offered by midwives is understood by you so that if there is misunderstanding identified it can be clarified by the researcher.

What will your responsibilities be?

Your responsibility will be to take part in the study by answering questions using your language that you will be comfortable with, that is, English or IsiXhosa. Questions will be asked by me (the researcher) and will last for about an hour. The researcher will ask questions about your feelings and how much you know about health education of your pregnancy that was given to you by midwives during visits. You are free to tell me anything that you know and you are comfortable with. I have selected three questions that you should answer to determine whether you still remember something important about them with regards to your pregnancy. The researcher is going to ask these questions here at the clinic but in a separate room that will be closed. It will be recorded by the tape recorder but you will not be identified.

This tape recorder will be kept under lock and key. The information recorded will be confidential and no one will be allowed to listen to the tape except myself and my supervisor Mrs Wendy Phiri of Stellenbosch University. The tape will be destroyed after five (5) years.

Will you benefit from taking part in this research?

There will be no monetary or direct benefit for you except the fact that midwives will make sure that all pregnant women are given important information about their pregnancy.

This information may make you and your community be aware of the importance of listening to the teachings (health education) that are given here at the clinic. These will help you know when there is something wrong with your life and that of the unborn baby and thus result to you and your family giving birth to healthy live babies.

Are there in risks involved in your taking part in this research?

The researcher foresees no risks or discomfort for you taking part in the study

If you do not agree to take part, what alternatives do you have?

If you do not agree you are free to do so and that will not affect your treatment at this clinic. You may stop participating in this study at any time you wish without you losing any of your benefits or rights.

Who will have access to your medical records?

The information that has been collected from you will not be repeated to the next participant therefore kept what you have said to me confidentially.

The information collected will be kept under lock and key and the access of which will only be to the researcher and the supervisor and other authorities of the University, i.e. study monitors and auditors and Research Ethical Committee members.

Will you be paid to take part in this study and are there any costs involved?

No you will not be paid to take part in the study. There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?

- You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.
- You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I agree to take part in a research study entitled *(insert title of study)*.

EXPERIENCES AND PERCEPTIONS OF PREGNANT WOMEN REGARDING HEALTH EDUCATION GIVEN DURING THE ANTENATAL PERIOD

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurized to take part.
- I may choose to leave the study at any time and will not be penalized or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at *(place)* on *(date)* 2009.

Signature of participant

Signature of witness

Declaration by investigator

I *(name)* ...Zukiswa s Mahlangeni..... declare that:

- I explained the information in this document to
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did/**did not** use an interpreter. *(If an interpreter is used then the interpreter must sign the declaration below.*

Signed at *(place)* .East London..... on *(date)* 9th June... 2012.....

Signature of investigator

Signature of witness

Declaration by interpreter

I (*name*) declare that:

- I assisted the investigator (*name*) to explain the information in this document to (*name of participant*) using the language medium of Afrikaans/Xhosa.
- We encouraged him/her to ask questions and took adequate time to answer them.
- I conveyed a factually correct version of what was related to me.
- I am satisfied that the participant fully understands the content of this informed consent document and has had all his/her question satisfactorily answered.

Signed at (*place*) on (*date*)

Annexure D: Certificate of translation

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Dear colleagues

DATA ANALYSIS, INTERPRETATION AND DISCUSSION.

1. Measuring instruments used: interviews.

They are valid and reliable. In her transcription there are no ambiguous or vague terms or words that assume too much about the respondent. Specific questions are used in the data analysis. The researcher's questions are simple, thus affecting accurate response.

Respondents are asked in isiXhosa (their mother tongue) questions that they have knowledge of. IsiXhosa questions are not negatively phrased , as some of the information is sensitive and is tabooed to talk about among amaXhosa. (See Table 4.10. Dark or clear water from the vagina ,sex).

The researcher's questions are commendable because they intend to make to the advancement of knowledge to the solutions of challenges experienced by pregnant women. Gleaning from the researcher's questions and responses it becomes clear how language is used by its speakers and that culture is embedded in it. Responses are authentic. It is a vast array of phenomena of how language is used in the real world of verbal interaction. The translated respondent's response could be seen as an awkward interaction by those who are not isiXhosa speakers.

EDITING

I have done a lot of editing in terms of word division, spelling mistakes , punctuation marks etc. These must be corrected otherwise errors like these distort the meaning of the work. They are not acceptable at all. Some of the errors that I have corrected could easily have led to the negatively worded questions and responses.

ETHICAL CONSIDERATIONS

The researcher must check ethical issues likely to manifest during the study. What is likely to be consequences of each of these to the subject? (sex , pregnancy and cultural encounters: politeness and taboos , male dominance, women’s powerlessness etc).

What precautions and safeguards has the researcher incorporated in the study design to protect the rights of human subjects?

EDITING:

PAGE 2 (Chapter 4)

Researcher must correct the following serious errors that are not acceptable in isiXhosa :

IsiXhosa : Khawundixelele ngowakuxelelwa ngamanesi ukuqala kwakho kule kliniki ngezi zinto zilandelayo:

(spelling mistakes and word division) : ngamanesi (one word)

ngezi zinto (two words

.....nika izizathu .(no question mark)

Capital letter ‘u’ of the word unike.

PAGE 6

-eat clinic tablets e.g folic acid

iipilisi zegazi (haematinics)

PAGE 7

“Ndaxelelwa ukuba igazi lam liklini,.....uze ngeempunduuza kujika.”

PAGE 8

Table 4.4. Early detection of abnormalities and treatment

“NdaxelelwakaGawulayo.....kwa-eli iiARVS”

PAGE 9

“ Umntwana xa enengxaki (spelling).....ukwenzela ukuba ibonwe kuse-eli.....adibane ngentloko.....ngoku sele ubeleka kube kungenakwenziwa nto.”

“Kwathiwa.....ekliniki.”

Page 10

“Ndaxelelwa ukuba ezi pilisi.....apha ekliniki.....,ukuba ndihamba ikliniki kakuhle uza kujongwa.....:

PAGE 11

“Ndaxelelwa ukuba.....ingakumbi..... ndanazo neemiscarriageNdaxelelwa ukuba mandingalindi idate yam nokuba kusebusuku”.

“Kufuneka ndiripote

PAGE 15

“Kwathiwaokuhealthy.....”

“ Bathi qha mandilime, nditye ikhaphetshu nesipinatshi, ndifuye iinkukhu , nditye amaqanda.”

“Umntu kufuneka

PAGE 16

“Ndaxelelwa ukubaicondomiza kundinceda loo ntokaGawulayo.”

“ Enye into kwathiwa mandotye nee-ARVs.....ndizitya ngonayini.....”

PAGE 17

“Ndaxelelwa ukubakuba ndiza kuba

PAGE 18

“Ukusela.....akabi nangqondo e'right'. “

These are corrections from the document.

I'm now about to send a report and my CV .

Regards

Thank you

Dr NP Satyo

Dr Nomsa Satyo

Annexure E: Certificate from the language editor



SERVICES

English/Afrikaans
* *Translations*
* *Editing*
* *Proof-Reading*
* *Academic Manuscript Preparation*
* *Archival Research*
* *Transcriptions from Archived Documents*



Member: South African Translators' Institute (SATI)

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Bellville 7530

TO WHOM IT MAY CONCERN

This letter serves to confirm that the undersigned

ILLONA ALTHAEA MEYER

has proof-read and edited the document contained herein for language correctness.

(Ms IA Meyer)

SIGNED

FOR: ZUKISWA SIGNORIA MAHLANGENI

**TITLE: EXPERIENCES AND PERCEPTIONS OF PREGNANT WOMEN
REGARDING HEALTH EDUCATION GIVEN DURING THE ANTENATAL PERIOD**

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:

Annexure F: Interview guide

TITLE: Experiences and Perceptions of Pregnant Women Regarding Health Education during the Antenatal Period.

The following open-ended questions were asked:

Xhosa: Khawundixelele ngowakuxelelwa ngamanesi ukuqala kwakho kule kliniki ngezi zinto zilandelayo:

- Ukubaluleka kokuhamba ikliniki
- Izinto ekufuneka uzokuzixela ngokukhawuleza esibhedlele okanye ekliniki
- Izinto omawuzenze nomawungazenzi xa ukhulelwe .Unike izezathu.

English: What can you tell me about the information you received from the midwives during your first visit with regards to the following:

- Importance of attending antenatal clinic?
- Problems that you must report immediately at the clinic or hospital?
- Do`s and dont`s during pregnancy and why?