

**KNOWLEDGE AND ATTITUDES OF PREGNANT WOMEN TOWARDS
ANTENATAL CARE SERVICES IN MBOMBELA MUNICIPALITY OF
MPUMALANGA PROVINCE, SOUTH AFRICA**

BY

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DECLARATION

I Lucia Innocentia Drigo declare that the research study entitled ‘***knowledge and attitudes of pregnant women towards antenatal care services in Mbombela Municipality of Mpumalanga Province, South Africa***’ is my own work and that this work has never been submitted before for any other degree at this university or any other institution and all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Ms Drigo L

date

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DEDICATION

This study is dedicated to:

My mother Ruth Nobela, for I am who I am today because of you.

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LIST OF ACRONYMS

ANC	Antenatal Care
ATT	Anti-Tetanus Toxoid
BANC	Basic Antenatal Care
CHC	Community Health-care Centre
DOH	Department of Health
DHIS	District Health Information System
DHS	Demographic and Health Survey
HBM	Health Belief Model
HIV	Human Immuno-Deficiency Virus
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
NDP	National Development Plan
NHI	National Health Insurance
RSA	Republic of South Africa
SDGs	Sustainable Development Goals
UNICEF	United Nations International Children's Fund
WHO	World Health Organization
PHC	Primary Health Care

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ABSTRACT

Antenatal care is the health care that women receive during pregnancy before the delivery of a baby; it aims to detect and treat existing health problems and to screen for complications that may develop in pregnancy.

The aim of the study was to explore and describe knowledge and attitudes of pregnant women towards antenatal care services in Mbombela Municipality, Mpumalanga Province, South Africa.

A qualitative, explorative, descriptive and contextual approach was used. The sample selected for the study from the population of pregnant women consisted of 18 pregnant women who attended ANC at six PHC facilities in Mbombela Municipality. Non-probability, purposive sampling was used to select the PHC facilities and the participants. Data was collected through in-depth individual interviews. The open coding method was used to analyse the data.

To ensure that ethical considerations were taken into consideration, permission to conduct the study was obtained from the University of Venda Ethics Committee and the Mpumalanga Department of Health. Participation in the study was voluntary and the ethically approved protocol of informed consent, anonymity and confidentiality were adhered to. Trustworthiness was ensured by considering the criteria of transferability, credibility, dependability and applicability.

The results from the study indicated that pregnant women knew about ANC services, but their knowledge of the best time to initiate ANC, as well as the procedures and importance of ANC was poor. The study found that the participants had favourable and unfavourable attitudes to ANC services. This indicates that there is a need for intensive health education regarding ANC services in the area.

Findings from the study led to recommendations that there is a need to review ANC programmes to improve the knowledge of pregnant women and communities and also to address the challenges faced by women when accessing ANC services.

Key words: antenatal care; attitude; health belief model; knowledge; pregnant women

CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

Antenatal care provides a platform for important health-care functions, such as health promotion, screening and diagnosis, and disease prevention which is provided to pregnant woman to promote the wellbeing of the mother and foetus (WHO, 2016). Appropriate and timely antenatal care (ANC) plays an important role in improving maternal and child health and preventing maternal deaths. Visits to ANC facilities are also opportunities to provide vital health information to most women relating to lifestyle risk, and also to offer social support and counselling (National Department of Health, 2016).

The Australian clinical practice guidelines: pregnancy care (2018) refers to ANC as the routine part of pregnancy for most of the 280 000 Australian women who give birth each year. ANC is considered to be a valuable opportunity to give verbal and other forms of information, support and advice about pregnancy and transition to parenthood, and to explain the aims of care offered during pregnancy. The South African National Department of Health provides basic guidelines for ANC (NDoH, 2016) and refer to ANC as health-care provided to a pregnant woman in the months and weeks before the birth of her baby. ANC is aimed at detecting those problems already present, or those that can develop in the pregnant woman and her unborn child. ANC has a further role of improving the general health of pregnant women.

The objectives of ANC in South Africa are to ensure, by antenatal preparation, the best possible pregnancy outcomes for women and their babies by:

- Screening for pregnancy problems;
- Screening for conditions or diseases such as HIV/AIDS, anaemia, mental health problems, sexually transmitted infections and hypertension;
- Assessment of pregnancy risk, by identification and recognition of pregnancy-related complications;
- Treatment of problems that may arise during the ANC period;

- Giving medication that may improve pregnancy outcomes, ATT immunisation, iron supplements and calcium;
- Providing information to pregnant women;
- Promoting healthy behaviour, healthy lifestyle and diet, as well as danger signs in pregnancy and when to visit a medical facility;
- Physical and psychological preparations for childbirth and parenthood, particularly preparing for early and exclusive breastfeeding, and essential care of newborn babies (NDoH, 2016).

Antenatal care services were based on European models in the early 20th century, but there was no scientific basis for the way it was performed. The model entailed monthly visits to an ANC facility until 28 weeks of gestation, fortnightly visits until 38 weeks of gestation, and weekly visits thereafter until labour. This amounted to 12 visits. The content of the visits remained the same and each visit was more of a ritual where it was considered essential for identifying and classifying women as low or high risk to have antepartum, intrapartum or postpartum complications, than a method designed to detect and solve problems (WHO, 2015).

The World Health Organisation (WHO, 2016) recommends a minimum of four ANC visits comprising interventions such as anti-tetanus toxoid (ATT) vaccination, screening and treatment of infections including HIV, identification and effective management of warning signs during pregnancy. The WHO recommends that women initiate ANC during the first trimester of pregnancy, from the 12th week of pregnancy with return visits during the 20th, 26th, 32nd and 38th weeks of pregnancy and then to go to a hospital at 41 weeks of gestation if still pregnant.

In Australia a woman's first pregnancy visit is supposed to be before 10 weeks of gestation. If it is a pregnancy with complications, a schedule of ten visits is regarded as being adequate. For subsequent uncomplicated pregnancies a schedule of seven visits are regarded as adequate. A planned schedule of ANC visits is agreed during the first antenatal visit based on the individual women's needs (Australian Government Department of Health, 2018).

Most of the activities carried out during ANC in sub-Saharan countries are in line with the WHO recommendations, although maternal mortality continues to be a major

challenge in these countries where most of the deaths are related to inadequate maternal care (WHO, 2016).

To improve maternal and perinatal outcomes, free services for pregnant women were introduced in South Africa. The basic ANC guidelines provided by the South African National Department of Health (2016), state that ANC should start when the pregnancy is diagnosed with follow-up visits at 20th, 26th, 32nd, and 38th weeks of gestation, then an appointment at 41 weeks at the hospital if the woman is still pregnant. The interventions for pregnant women in SA are based on the WHO ANC model which recommends a minimum of four antenatal visits.

Antenatal care services provided to pregnant women in South Africa should start on the first visit irrespective of the woman's gestational age. The services includes physical examination, history taking, measurement of mid-upper arm circumference, estimation of gestational age, screening investigations, provision of medication, vaccines and information for pregnant women (NDoH, 2016). Essential information must be provided to all pregnant women by health care workers. This includes; five danger signs and symptoms of pregnancy, self care in pregnancy, a delivery plan, newborn and infant care (NDoH, 2016).

Globally, in 2006 and 2013 about 82 % of pregnant women accessed ANC from skilled personnel at least once, but only 56% paid the recommended four ANC visits. In regions with the highest maternal mortality rates, even fewer women paid the four ANC visits. In Eastern and Southern Africa, 56% of urban and 39% of rural women visited ANC facilities four or more times. Every day in 2013 about 800 women died as a result of complications of pregnancy and childbirth and most of these could have been prevented (UNICEF, 2014).

In Australian states and territories where data on the number of ANC visits during pregnancy are available, 98.4% of women who gave birth at 32 or more weeks of pregnancy had made at least one antenatal visit, and 78.4% of the pregnant women made at least one antenatal visit in the first trimester, before 14 weeks of pregnancy (Laws, Li & Sullivan, 2010).

The most recent Demographic and Health Survey (DHS, 2016) data illustrate that 11% of women started ANC in the first trimester in Ethiopia, 16% in Nigeria and 55% in Ghana. Moreover, in sub-Saharan countries the trend over the last ten years in the

proportion of women making at least four ANC visits varies. DHS further illustrates that in Africa 8 out of 10 countries showed an increase in the number of pregnant women attending ANC facilities, whereas in southern and east Africa six out of 11 countries have experienced declines.

In 2015 the United Nations reported on the failures and successes of the MDGs; although there are some remarkable improvements, some targets remained unfulfilled. As MDG Number 5 aimed to improve maternal health by reducing the maternal mortality ratio (MMR) by 75%, very few countries had achieved this target. There was a 45% reduction in the global MMR. In 2015 the MMR remained highest in the sub-Saharan Africa at 546 maternal deaths per 100 000 live births, compared to the global MMR of 216 maternal deaths per 100 00 live births.

The Sustainable Development Goals (SDGs) for 2030 were presented in September 2015. The SDGs aim to ensure healthy lives and promote well-being for all at all ages. SDG Number 5 aims to achieve gender equality and empower all women and girls, and targets include reducing the global MMR to not more than 70 maternal deaths per 100 000 live births by 2030; in addition, a national target that no country must have an MMR of more than 140 MMR per 100 00 live births (UNICEF, 2015).

In South Africa`s MDG report by Statistics South Africa (2015), ANC coverage using the district health information system of the National Department of Health, data are remarkably high with over 100% of women utilising care at least once during pregnancy from 2006. However, the results show that maternal mortality rates (MMR) increased between 2002 and 2009 but decreased in 2010. MMR increased from 133 maternal deaths per 100 000 live births in 2002 to 299 in 2007. It increased further to 300 and 312 in 2008 and 2009 and dropped to 269 maternal deaths per 100 000 live births in 2010. Based on these results, it is concluded that South Africa is still lagging behind the SDG target of fewer than 140 maternal deaths per 100 000 live births.

A number of policies and programmes aimed at improving maternal health in South Africa have been put in place since 1994. Access and use of contraceptives and ANC services are components of reproductive health, however poor transport facilities, lack of proper health-care facilities and lack of appropriately trained staff, the latter being responsible for an inability to follow standard procedures and poor

initial assessment and diagnosis, are some of the factors that hinder progress in reducing maternal mortality in South Africa (NDoH, 2011). The interplay of socio-economic factors and gender inequalities exert a negative outcome on maternal health, affecting the extent to which health-care services are accessed and utilised, making empowerment of women essential in lowering maternal mortality.

A key challenge in maternal mortality in South Africa is the absence of multi-sectoral planning to address socio-economic inequalities necessary for the approach to primary health-care to be successful. The sixth report on the confidential enquiries into maternal deaths in South Africa reaffirms that obstetric haemorrhage and hypertensive disorders (which could have been prevented through appropriate screening and diagnosis during pregnancy) are some of the main causes of maternal deaths (NDoH, 2015). The committee maintains that besides improving health systems and the level of primary health-care, South Africa should heed policy interventions that attempt to lower maternal mortality by fostering economic development, empowering women, reducing fertility rates, improving educational levels, and improving health systems (NDoH, 2015).

In South Africa, the Saving Mothers Report indicates that 18.1% of the women who died did not have ANC, while 26.8% delayed seeking care (NDoH, 2014). The report also identified major causes of maternal deaths, such as non-pregnancy related infections (50%), complications of hypertension (14%), pregnancy related infections (5%), complications of pre-existing medical conditions (9%). Forty percent of all the maternal deaths would have been avoidable if the women had initiated ANC earlier. South Africa has more stillbirths than neonatal deaths, which is a reflection of poor quality antenatal care (NDoH, 2014).

The Mbombela Municipality PHC facilities provide ANC services according to the recommendations and guidelines of the national department of health although it has the same challenges faced globally; that is women not utilising ANC services effectively. One of the objectives of ANC in South Africa is to provide information to pregnant women (NDoH, 2016), information provided must inform women when to start ANC, health education regarding pregnancy, benefits and importance of antenatal care services.

In the Saving Mothers Report (NDoH, 2018), it is reported that between the year 2014 to 2016 Mpumalanga Province had 300 reported maternal deaths with 145 in Ehlanzeni district. The most frequent patient behaviour was related to avoidable factors like delays in accessing medical help and poor or no ANC attendance (NDoH, 2018). A total of 19.7% of maternal deaths were attributed to women who did not attend ANC facilities, 20% attended ANC facilities infrequently, and 27.0% delayed seeking medical help (NDoH, 2018).

Data from the 2014 to 2016 South African Confidential Enquiries into maternal deaths report suggest that the main causes of maternal deaths are related to challenges of the healthcare system, failure to use health care facilities, inadequacy of services and substandard care related to knowledge (NDoH, 2018). Statistics from DHS shows that more women still attend their first ANC visit after 20 weeks of pregnancy, and do not meet the required four visits as recommended by the WHO. Knowledge of importance of ANC services is therefore important to pregnant women. Hence, it was due to this background that the study to determine knowledge and attitudes towards antenatal care services in Mbombela Municipality was conducted.

1.2 STATEMENT OF THE PROBLEM

This study developed as a result of the disturbing official statistics mentioned on the preceding paragraph, government data, and the personal experience of the researcher while she was working as a qualified midwife at one of the facilities offering ANC services in Mbombela Municipality, Mpumalanga Province. The researcher was alarmed by the high number of pregnant women who did not honour their ANC appointments and defaulted on their visits, visiting the clinic only later in pregnancy or even during labour.

Women were noted not to have enough knowledge regarding ANC services as their most reason for attending ANC was to obtain the maternity case record which they believed they cannot be assisted during delivery if they did not have it. Some of these women did not know when the correct time to initiate ANC was. When visiting the facility for their ANC, pregnant women were observed to have strings tied around their waist and having incisions around their abdomen, indicating that this was done as their part of traditional practices that are performed during pregnancy.

During perinatal meetings conducted monthly at one of the tertiary referral hospital located in Mbombela Municipality, file audits indicate that 80% of the mortality cases could have been prevented if pregnant women had started ANC at the recommended time and had adhered to regular follow-ups.

Despite the national target of ANC coverage of 100%, only 92.9% was achieved in 2017 nationally and in Mpumalanga Province, only 86.0% has been achieved. According to the Ehlanzeni District Health Information System 2016/2017 report, the achievement rate in Mbombela Municipality is 80.0%. ANC statistics on how frequently women attend ANC facilities in Mbombela is not encouraging, because there are still gaps that exists and the statistics are usually based on women who have made only one visit instead of the recommended four visits.

1.3 PURPOSE OF THE STUDY

The purpose of this study was to determine the knowledge and attitudes of pregnant women towards ANC services in Mbombela Municipality of Mpumalanga Province, South Africa.

1.3.1 OBJECTIVES OF THE STUDY

This study aimed to:

1.3.1.1 Explore the knowledge of pregnant women about ANC in Mbombela Municipality, Mpumalanga Province;

1.3.1.2 Describe the attitudes of pregnant women towards ANC services;

1.3.1.3 Explore the pregnant women's traditional practices influence in relation to the management of pregnancy.

1.3.2 RESEARCH QUESTIONS

The study was conducted taking into consideration the following questions:

1.3.2.1 What knowledge and attitudes do pregnant women have about ANC in Mbombela Municipality?

1.3.2.2 How do traditional practices influence the management of pregnancy?

1.4 SIGNIFICANCE OF THE STUDY

The study helped to determine whether pregnant women are knowledgeable about ANC services, and how the attitudes of pregnant women influenced the utilisation of

ANC services. Findings from this study could help in training all health-care providers involved in maternity care to improve ANC provision by providing information regarding ANC services to pregnant women in their facilities to improve the knowledge of pregnant women. The study might help ANC facility managers and implementers to gain knowledge on how to develop strategies, community and facility based programmes successfully to address the identified knowledge gaps. Findings from the research might contribute to existing knowledge with new findings and with literature for further research regarding ANC services. With this study, policy makers could get information on the feasibility of implementing reviews of the ANC guidelines. Recommendations from this study may help in lowering the maternal mortality ratio towards the SDG's target of not more than 140 maternal deaths per 100000 live births as the knowledge and positive attitudes regarding ANC services may raise awareness among pregnant women to utilise ANC earlier.

1.5 DEFINITION OF CONCEPTS

Pregnant woman: A female being who carries a developing embryo or foetus in her womb (WHO, 2016). In this study, a pregnant woman refers to a female who is carrying a foetus and has utilised ANC services at one of the selected PHC facilities in the Mbombela Municipality.

Antenatal care: The care provided by a skilled health-care professional to pregnant women in order to ensure the best health conditions for both mother and baby during pregnancy (WHO, 2016).

In this study antenatal care is defined in the same way as the conceptual definition.

Antenatal care services: Service received by pregnant women related to pregnancy care including general examination, laboratory investigation, treatment provided, counselling and foetal wellbeing done (assessing foetal health) (Bastola, Yadav & Gautam, 2018).

Antenatal care services is defined in the same way as the conceptual definition in this study.

Knowledge: The fact or condition of knowing something with familiarity gained through experience or education (Webster, 2014).

In this study knowledge of ANC refers to the possession of adequate information regarding ANC services by pregnant women residing in Mbombela Municipality.

Attitude: Is the way one thinks or feels about someone or something (Merriam, 2014).

In this study attitude refers to the pregnant women feelings of like and dislikes towards ANC services.

1.6 THEORETICAL FRAMEWORK

The study was grounded or based on a scientific theory of the Health Belief Model.

1.6.1 HEALTH BELIEF MODEL

The Health Belief Model (HBM) is by far the most commonly used theory in health education and health promotion (Glanz, Rimer & Lewis, 2002). It was developed in the 1950s as a way to explain why medical screening programmes offered by the United States public health system were not successful. It is a psychological model that explores and explains health behaviours.

1.6.1.1 Assumptions of the Health Belief Model

The Health Belief Model assumes that people are largely rational in their thoughts and actions, and will take the best health supporting action if they: feel that it is possible to address a negative health issue; have a positive expectation that taking the proposed action will be effective in addressing the issue; believe they are able to take the proposed action.

The relationship between the above assumptions and this study is that the researcher assumes that those who visit ANC facilities earlier and make the recommended follow-up visits:

- (a) Feel that health risks to the mother and foetus can be avoided;
- (b) Believe that they will be preventing complications that may arise during pregnancy and labour;
- (c) Believe that they can have a safe pregnancy, labour and puerperium period.

There are four components that serve as the main constructs of the model: perceived seriousness, perceived susceptibility, perceived benefits and perceived

barriers of recommended health action. However, motivating factors and self-efficacy has been added. Each of these constructs can be used to explain health behaviour as it will be applied in the study.

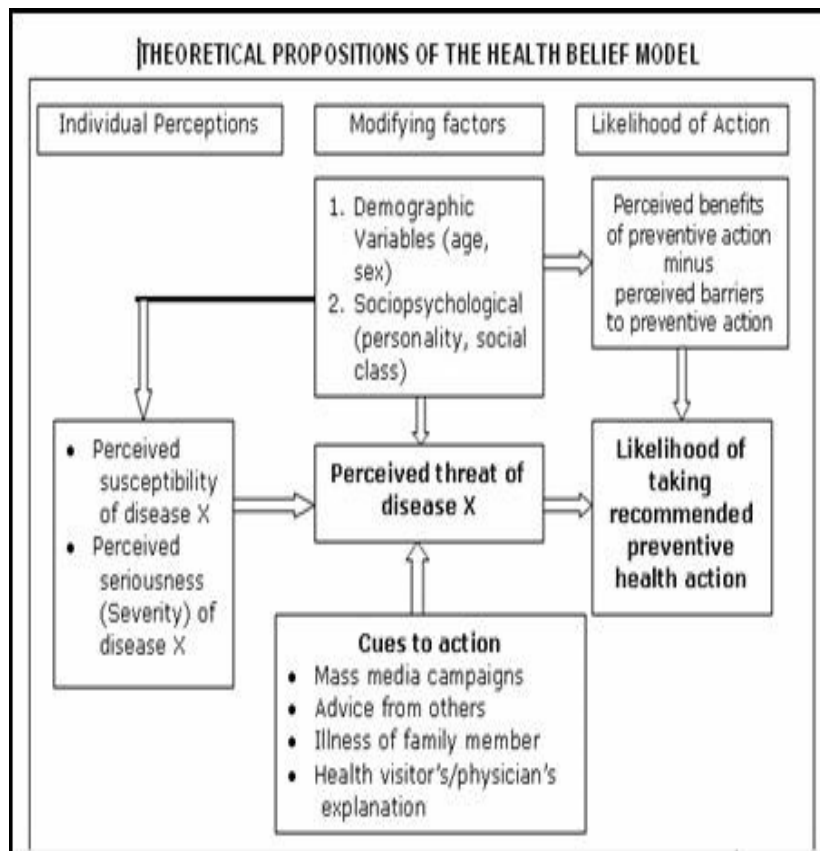


Figure 1.1 Theoretical propositions of the Health Belief model (Glanz, Rimer & Lewis, 2002).

1.6.2 The major concepts of the health belief model

1.6.2.1 Perceived severity or seriousness

The construct of perceived seriousness or severity of a disease, while it is often based on medical information or knowledge, it may also come from beliefs a person has about the difficulties a disease would create or the effect it would have on his or her life in general (Glanz et al, 2002). This is the individual perception of the seriousness and consequences of a condition. In the case of pregnant women, it influences whether they maintain health during pregnancy or how they respond to illness or pregnancy-related complications when they arise during pregnancy, labour or the postnatal period.

1.6.2.2 Perceived susceptibility

HBM predicts that individuals who perceive that they are susceptible to a particular health problem will engage in behaviours to reduce their risk of developing health problems (Glanz & Bishop, 2010). When people believe they are at risk for contracting a disease they are likely do something to prevent it. However, the opposite also happens when people believe that they are not at risk or at low risk and unhealthy behaviours tend to result. Perceived susceptibility to a health condition depends on the knowledge that the individual has.

1.6.2.3 Perceived benefits

The construct of perceived benefits is a person's opinion of the value or usefulness of a new behaviour in decreasing the risk of developing a disease. People tend to adopt healthier behaviours when they believe the new behaviour will decrease their chances of developing a disease (Glanz & Bishop, 2010). This is also true of an individual's belief in the value of an action to prevent a condition.

1.6.2.4 Perceived barriers

The last construct of HBM addresses the issue of perceived barriers to change. This is an individual's own evaluation of the obstacles in the way of adopting a new behaviour. In order for a new behaviour to be adopted, a person needs to believe that the benefits of the new behaviour outweigh the consequences of continuing the old behaviour (Green & Murphy, 2014).

1.6.2.5 Self-efficacy

The concept of self efficacy or perceived ability take the recommended action is defined by Green and Murphy (2014) as the strength of an individual's belief in his own ability to respond to novel or difficult situations and to deal with any associated obstacles or setbacks. The confidence in themselves is what motivates them to take action. The self confidence of pregnant women can make them believe that they can overcome any barrier that may stop them from attending an ANC facility at an early stage of pregnancy as recommended.

1.6.2.6 Cues to action

Cues to action is an added concept to the health belief model concepts as the concept that would activate a person's readiness to act and stimulate overt behaviour (Glanz & Bishop, 2010).

Cues to action are the strategies applied to activate and sustain specific actions. This occurs when the individual feels there is a desire to take the necessary actions after believing that they have the capacity to do so (Tshabalala, 2012).

1.7 RESEARCH METHODOLOGY

The researcher used a qualitative, explorative, descriptive and contextual approach in this study. The research focused on the exploration of the knowledge and attitudes of pregnant women with regard to ANC.

Pregnant women were studied in their natural setting in order to discover their social world and culture. The researcher interviewed the pregnant women and learned by observing and talking to them and was able to identify the characteristics and significance of their knowledge and attitudes as described by them (Burns & Grove, 2014).

The research was conducted in six Primary Health-care (PHC) facilities in Mbombela Municipality which is situated in the Ehlanzeni district of Mpumalanga Province, South Africa. The population of the study was pregnant women visiting ANC centres at the PHC facilities within the Mbombela Municipality. Non-probability, purposive sampling was used to select the municipality and PHC facilities for the study. It was also used to select the pregnant women who participated in the study.

Permission to conduct the study was obtained from the University of Venda ethical committee and from the Mpumalanga Department of Health. Data were collected through in-depth individual interviews using a tape recorder. To make sure that the interviewer received all the information from the participants, notes were taken and follow-up questions emerged from the participant's information until saturation was reached. Data saturation was reached after an average of three women were interviewed in each PHC facility and a total of 18 women participated in the study. Analysis of the data was conducted qualitatively using the open coding method. To

ensure trustworthiness, the criteria for transferability, credibility, applicability and dependability were considered.

To ensure that ethical considerations were applied, permission to conduct the study was obtained from the Mpumalanga Department of Health and ethical clearance was obtained from the University of Venda ethical committee. Participation in the study was voluntary and conducted in accordance with the ethically approved protocol of informed consent. Anonymity and confidentiality were maintained during the interviews.

The full description of the research design and methods will be discussed in Chapter 3.

1.8 OUTLINE OF THE DISSERTATION

The dissertation consists of five chapters, set out as follows:

Chapter 1

Overview of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, definition of concepts used in the study, theoretical framework, research methodology and the outline of the dissertation is covered under this chapter.

Chapter 2

This chapter provides a literature review, literature of other studies undertaken on knowledge and attitudes of pregnant women towards ANC. The following are covered in this chapter: Overview of antenatal care; Strategies by government to improve utilisation of ANC services; Knowledge of pregnant women related to ANC; Attitudes of pregnant women towards ANC; Perceived barriers to utilising ANC and cultural beliefs.

Chapter 3

The research methodology used in the study is covered in this chapter. The research design, setting, population, sampling, data collection methods, data analysis, trustworthiness and ethical considerations are described.

Chapter 4

The findings that emerged from the study are presented and discussed.

Chapter 5

This chapter presents the conclusions and recommendations based on the findings and the limitations to the study are discussed.

1.9 SUMMARY

Chapter 1 presented an introduction and background of the study. The information gathered was global, and mentioned facts from different countries, as well as South Africa as a whole and Mbombela Municipality in particular. The problem statement, purpose of the study, research questions, significance of the study and definition of concepts were outlined in this chapter.

The next chapter presents a discussion of the literature reviewed about the topic under study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The previous chapter provided an introduction and the contextual background on the topic under study. This chapter will provide an outline of the literature reviewed. A literature review is an organised written presentation of what has been published on a topic by scholars with the purpose of conveying to the reader what is currently known regarding the topic of interest (Burns & Grove, 2014). A literature review is conducted by collecting all available information on the research topic. The previous research conducted on the topic and the gaps in the knowledge on the topic are also indicated. It includes a discussion of available information on the research topic, summarises arguments and ideas, describes the intellectual progression in the field and evaluates sources (Meyer, VanNiekerk, Shangase & Naude, 2009).

The aim of this chapter is to enhance the understanding of the results of related or similar studies and provides a contextual background to the topic under discussion. The following aspects are covered in this chapter:

- Overview of ANC;
- Strategies by government to improve utilisation of ANC services;
- Pregnant women knowledge and awareness regarding ANC services;
- Pregnant women's attitudes in relation to ANC services;
- Perceived barriers to utilising ANC services;
- Cultural beliefs and pregnancy.

2.2 OVERVIEW OF ANTENATAL CARE

Pregnancy is a normal physiological process. However, during pregnancy, it is possible that something can go wrong, and the aim of ANC is to keep the woman and baby under surveillance in order to maintain or improve her health physically, psychologically and spiritually throughout pregnancy (Sellers, 2011). ANC is a key element of the package of services aimed at improving maternal and newborn health. However, globally it is estimated that only half of pregnant women receive the

recommended amount of care (UNICEF, 2015). ANC can help women prepare for delivery and understand warning signs of problems during pregnancy and childbirth.

WHO (2015) described the following as major goals of ANC:

- To promote and maintain the physical, mental, and social health of mothers and baby by providing education on nutrition, personal hygiene and birthing process, during ANC services the health care provider and pregnant women discuss about important issues affecting the women's health and her pregnancy, discussions include; good nutrition and its importance to the health of the mother and baby and how to get enough calories, essential macronutrients and micronutrients. How to recognize danger signs, what to and how to get help, good hygiene and infection prevention practices. Risks of using tobacco, alcohol, drugs and traditional medication. Promotion of rest and benefits of breastfeeding to mother and baby (WHO, 2015).
- To detect and manage complications during pregnancy, whether medical, surgical or obstetrical; As part of ANC the health care provider discuss with the woman and examines her for signs or symptoms of chronic or infectious diseases, congenital problems and other problems that might need additional care. Conditions such as HIV/AIDS, malaria, syphilis or any other sexually transmitted infections. Anaemia, diabetes, heart diseases, malnutrition and tuberculosis which may harm the health of the pregnant woman or unborn child if they are left untreated (WHO, 2015).
- To develop birth preparedness and complications readiness plan; ANC includes attention to a woman's preparation to childbirth and her plans for child birth and newborn period. During this time the woman is encouraged to select a skilled provider for birth, the place of birth and to establish an emergency plan for a person to make decisions on her behalf in case she is ill or unable to make decisions. As the woman might develop a life threatening complication and most of these complications are unpredicted, the woman and her family must be ready to respond, the woman must be ready to pay for any needed medications, transport and costs of unexpected emergency (WHO, 2015).
- To help prepare mother to breastfeed successfully, experience normal puerperium, and take good care of the child physically, psychologically and socially, during ANC the health care provider discuss with the woman ways of

getting support she will need from health care workers, family, community and making arrangements for the newborn. The benefits of child spacing and early or exclusive breastfeeding, options for family planning services after birth, protections of HIV and other sexually transmitted infections or issues related to mother to child transmission if the woman is found to be HIV positive (WHO, 2015).

The best time for women to initiate ANC is when they have missed their first menstrual period or as soon as they suspect pregnancy, which usually occurs before ten weeks of gestation. On the first ANC visit, personal information of the woman is taken and recorded. A detailed history of the woman is taken, as this is considered to be an extremely important part of ANC and also serves as a screening procedure which can identify abnormal conditions. History-taking includes the social history and family history where the woman is questioned about her family, history of multiple pregnancies, congenital diseases or deformities, including her mother's pregnancies, labour and the condition of her siblings. Past medical or surgical history, present medical history, gynaecological history, past obstetrical history, number of pregnancies, abortions and parity are also recorded (Sellers, 2011).

ANC facilities offer an important opportunity for linking the health system and the community by encouraging women to deliver their babies with the help of a skilled birth attendant. ANC facilities also provide an opportunity to disseminate health information to women relating to lifestyle, and to offer social support and counselling. In addition, the provision of ANC services is important for women living with HIV, as illnesses related to HIV are the biggest cause of death among pregnant women in South Africa (Tshabalala, 2012). Regular visits to facilities for ANC are aimed to ensure that the health of the pregnant woman and foetus is well maintained. These visits also play an important role in achieving a successful labour and delivery process (Simran, 2011).

ANC facilities provide careful screening of all women by ensuring the early detection, referral and management of complications during the pregnancy. It also ensures that any woman with an abnormal condition or history which indicates the possibility of an abnormal condition (which is referred to as high risk pregnancy) is delivered in a hospital where special care and advanced technology are readily available. Initiating

ANC before twenty weeks of pregnancy is necessary, as it provides a more accurate date of conception and a more accurate estimated date of delivery (EDD) as well as a more accurate baseline in assessing the growth of the foetus by means of symphysis fundal height (SFH) or by palpation (Sellers, 2011).

The provision of ANC services brings a positive pregnancy outcome as it enables the identification of risk factors and early diagnosis of pregnancy complications and appropriate management. The positive outcomes can be achieved by screening of pregnancy problems, assessment of pregnancy risks, giving medication, treatment of problems that may arise during pregnancy, provision of information to the pregnant woman and physical and psychological preparation of the woman for childbirth and parenthood (NDoH, 2015).

As soon as the woman is diagnosed as being pregnancy, basic ANC is provided for her at the primary health-care level. Pregnant women are provided with health information during their ANC visits which may be in a form of pamphlets, booklets, illustrated cards or verbally by health-care professionals (NDoH, 2011). Despite all these strategies women are found to initiate ANC later in pregnancy.

2.3 STRATEGIES BY SOUTH AFRICAN GOVERNMENT TO IMPROVE UTILISATION OF ANTENATAL CARE SERVICES

The government has put in place some strategies with the aim of improving the utilisation of ANC facilities by pregnant women.

2.3.1 The National Development Plan

The National Development Plan (NDP) 2030 vision sets out nine long term goals for South Africa. Five of these goals relate to improving the health and wellbeing of the population. The goal of the plan in South Africa is to accelerate the reduction of maternal and child morbidity and mortality through accelerated implementation of evidence-based interventions essential to improve maternal health and child survival through effective advocacy of quality maternal and child health which includes the promotion of early ANC (NDoH, 2011). The plan sets out a health-care target of a fewer than 100 maternal mortality rate per 100 000 live births by 2019.

2.3.2 The mom-connect programme

In 2014 the Department of Health launched a new mobile phone based messaging service (mom-connect) to provide South Africa's estimated 1.2 million pregnant women with free ANC health-care information. This project is aimed at assisting pregnant women with information during pregnancy and childbirth by sending personalised messages to each woman through their mobile telephones and also allows pregnant women to engage with the health system through help desk services (NDoH, 2015).

Pregnant women can obtain all the information they need regarding pregnancy from this service. They are even able to lodge complaints or place a compliment with regard to the services they have received during their ANC visits to the clinics. It also helps in reminding women of their follow-up dates or when they should return to the clinic. Although the use of mobile phones to promote maternal care has not yet been reflected for effectiveness in research evidence, a cluster of randomised controlled trials has provided valuable information. The trials assessed the use of mobile phone intervention to improve access to maternal health services in a resource-limited setting. The results of the trials revealed that mobile phone intervention significantly increased the number of women receiving the recommended four ANC visits during pregnancy (Lund, Nelsen, Hemed, Boas, Said, Makungu & Rasch, 2014). In addition, there was an improvement in the quality of care received by women, with more women receiving preventive health care and more women with pregnancy complications identified and referred (Lund et al, 2014).

Unfortunately, this project caters only for women who are able to read and write (Barron, Peter, LeFevre, Sebidi, Bekker, Allen, Parsons, Benjamin & Pillay, 2018). This indicates that little information exists on strategies that could motivate pregnant women to utilise ANC services; pregnant women still have a knowledge deficit regarding ANC.

2.4 PREGNANT WOMEN KNOWLEDGE AND AWARENESS REGARDING ANTENATAL CARE SERVICES

Knowledge is power and it enables decision making (Duman, Farrington, Kerr & Naish, 2015). According to Rosliza and Muhamad (2011) Health knowledge is a vital element that enables women to be aware of their health status, knowledge of and

attitude to antenatal services among pregnant women is critical for effective utilisation of ANC services by all members of society.

Knowledge is critical to human life because everything that humans do depends on the knowledge they have (Igbokwe, 2012). Knowledge can be described as the sum of concepts, views and propositions which have been established and tested (Ojong, Uga & Chiotu, 2015). Pregnant women can obtain knowledge regarding ANC through the media, health education in health-care facilities, brochures or pamphlets and health education programmes.

A study conducted in Nigeria by Igbokwe (2012) found that pregnant women in the area of study had a moderate level of knowledge with regard to ANC services. This knowledge included visiting ANC clinics to ensure the general wellbeing of the pregnant woman. ANC services were provided to pregnant women from conception, through labour and the puerperium, and if they had complications associated with pregnancy. Women from urban areas had a high level of knowledge about ANC, while those from rural areas had a moderate level of knowledge (Igbokwe, 2012).

Women are not aware of ANC services because they are less educated about ANC services and they do not perceive the importance of attending ANC services (Sanda, 2014). Awareness and information given to pregnant women is important as this will determine whether the women are aware of antenatal issues or not (Maluleke, 2017).

A study conducted in Tshino village, Limpopo by Maputle, Lebese, Khoza, Shilubane and Netshikweta (2013) revealed that pregnant women knew about and understood ANC services and they also understood what was expected of them when they attended ANC facilities. Participants knew that ANC involves a routine check-up which includes blood tests, an assessment of the position of the baby, haemoglobin level tests, rhesus factor tests and urine testing (Maputle *et al.*, 2013). However, the study further illustrated that pregnant women showed an inadequate knowledge about the utilisation and importance of booking time for ANC visits. The pregnant women indicated that they booked ANC visits whenever they felt like it, if even if it was after four months. They felt that it was important to attend ANC facilities but they were not aware that it was important to book an appointment before the end of the

12th week. They were not aware of the number of many times they should attend ANC facilities before giving birth.

The education status of pregnant women is an influencing determinant in the effective utilisation of maternal and child health. Urban and rural locations have a great impact on the utilisation of antenatal services. A study conducted in Nigeria and Ghana by UNICEF (2014) showed that educated expectant mothers access antenatal more than their uneducated counterparts, it was also noted that the proportion of deaths associated with pregnancy related diseases appeared to be higher among uneducated pregnant women and that the high rate is associated with non-utilisation of antenatal services by this group of women. Ideyi (2002) agreed that inadequate knowledge concerning health-related matters usually lead to negative attitudes towards the health issue.

A high level of education also enhances a woman's autonomy over her health and increases a woman's confidence in making decisions regarding her health and that of the child (Mwangakala, 2016). Furthermore, women who have spouses with high education levels tend to use skilled services more than those with low educational levels as they are usually the key household decision-makers and income controllers who decide on where and when to seek health-care.

In spite of the availability of and free access to ANC services, very few women initiate their visits during their first trimester of pregnancy (NDoH, 2016). The cause of late booking may be due to poor understanding of the importance of early booking (Maluleke, 2017). Therefore, ANC visits should be educational to ensure that more women attend ANC facilities earlier in their pregnancy and understand the information given to them and that they follow instructions (Sellers, 2011).

2.5 PREGNANT WOMEN ATTITUDES IN RELATION TO ANC SERVICES

Attitude is a person's affective feelings of like and dislikes (Igbokwe, 2012). Attitude emerges from personal experiences and can be positive or negative (Igbokwe, 2012). An attitude is positive when a person develops a strong attraction of like for the situation, objects or other person or groups, while it is negative when the person develops a strong dislike for situation, objects, persons, groups or any other identifiable aspects of our environment. A pregnant woman's personal experience to antenatal services or health-care providers can be positive or negative; however,

knowledge appears to be paramount in the attitude of people to any health-related programme (Fraser & Cooper, 2009).

The way one thinks about or understands someone or something greatly influences one's decision making (Dietrich, 2010). This implies that the way women perceive pregnancy may affect their decision in seeking ANC services, which can lead them to delay seeking care (Maluleke, 2017). The efforts of health-care providers to ensure that women receive appropriate care during pregnancy have been hampered by the fact that women do not perceive pregnancy to be a disease and therefore do not see the necessity of seeking health-care for what they perceive to be normal and a common condition. It is true that pregnancy is not a disease but a normal physiological process (Sellers, 2011).

Studies of the knowledge of, attitudes to and practices of pregnancy and ANC have been conducted worldwide to determine why the use of health services tended to be low during pregnancy and delivery (Igbokwe, 2012, Maputle et al, 2013, Mwangakala, 2016). These studies have used focus groups and other methods to elucidate women's perceptions of pregnancy, illness and pregnancy-related complications. The results show clearly the extent to which maternal complications were not recognised as being serious by women or their families. The conclusion drawn was that if sufficient information and education were provided, women could be persuaded to use the health services set up for them (Mwangakala, 2016, Igbokwe, 2012, Maputle et al, 2013).

Women's perceptions of what quality of health-care entails do not always coincide with technical definitions of quality; women may express a preference for a treatment or intervention that is inappropriate or unnecessary. For example, a study in Indonesia, found that women preferred to use the services of birth attendants, who hurried delivery by using oxytocin to increase contractions (Titaley, Hunter, Dibley & Heywood, 2010).

In a qualitative study conducted in Tanzania, findings indicated that women do not perceive significant health threats during pregnancy, and viewed more than one ANC visit as unnecessary (Gross, Alba, Glass, Schellenburg & Obrist, 2012). Women perceive labour and delivery as a time of significant health risks that requires medical

attention. Most women's primary reason for seeking ANC was to receive an ANC attendance card that is required to deliver at the health facility (Gross et al, 2012).

2.6 PERCEIVED BARRIERS TO ANTENATAL CARE

The lack of information and knowledge about sexual and reproductive health and rights contributes to women delaying or avoiding ANC. A paradox was highlighted in the findings of a study conducted by Amnesty International in Mpumalanga and Kwazulu-Natal (2014). Pregnant women had not received information about the value of attending ANC facilities because it was only available at the clinics. Furthermore, it stated that for many women fear about lack of privacy and patient confidentiality in health facilities put them off visiting their local clinics, made them reluctant and led them to delay seeking ANC (Amnesty International, 2014). It is evident that ANC must be made attractive to women, this can be achieved by the way she is treated during ANC visits. If the woman is treated roughly, the likelihood of the woman not returning to the facility is very high and she will not be enthusiastic about the instructions given to her at the clinic (Sellers, 2011).

2.6.1 Awareness and acceptance of pregnancy

In a study conducted in Tanzania by Gross et al (2012) it was revealed that the ability of women to identify and accept that they are pregnant has been said to be one of the causes of the delay to seek ANC services. The study further indicated that younger women were particularly likely to delay accessing ANC until late in the second trimester simply because they were unaware of typical pregnancy indicators (Gross et al, 2012). Recognition of the signs and symptoms of pregnancy was often made by relatives, partners or other community members (Downe, Finlayson, Walsh & Lavender, 2009).

Many women struggle to accept their situation, especially if the pregnancy is unplanned, as they feel they are not prepared to make changes in their lives and they spend much time considering termination of pregnancy. Lack of support, disapproval and reaction from family members, partners or community members have a significant effect on women's willingness to accept their pregnancy (Amnesty International, 2014).

2.6.2 Accessibility of antenatal care services

Under section 27 of the South African constitution, everyone has the right to have access to health-care services, including reproductive health (Brand, De Vos & Freedman, 2014). All health facilities and services must be known to all, must be affordable for all individuals and be within safe, physical reach for everyone especially marginalised groups. Although it was declared in 1994 that health-care provided for children under six and pregnant women would be for free in South Africa, the legacy of inequalities of gender, race, geographic and health systems created from the apartheid era continues to have an impact on the health of women living in South Africa (Amnesty International, 2014).

Costs diminish the potential for women to access ANC services early and regularly. Inability to travel to and from ANC facilities may put a strain on the limited financial resources of women from relatively deprived communities; they find ANC services difficult to access (NDoH, 2015). Access to ANC services is a critical factor especially in low and middle income countries.

In a study conducted in Pakistan a significant relationship between wealth and institutional delivery was found, the effect of wealth led to authors to conclude that many Pakistani women chose to deliver at home because of their inability to pay the high cost of delivery at a health facility (Agha & Williams, 2016).

Although in South Africa pregnant women access health services for free in public health-care institutions, in 2013 the South African Human Rights Commission (SAHRC) found the Mpumalanga Department of Health in violation of the constitutional rights of women to access health-care services and the right to dignity. Reasons given for these findings were that there were ineffective management structures and infrastructure, inadequate access to PHC facilities and insufficient human resources required to deliver quality health-care services (Amnesty International, 2014).

The Demographic and Health Survey (DHS) shows that 94% of all pregnant women attend ANC facilities at least once. It further states that ANC coverage is worst in poor areas and best in urban areas. However, Fraser and Cooper (2009) assert that urban or rural location has no impact on the attitudes of pregnant women to health programmes.

2.6.3 Privacy at facilities including fear of HIV testing

Health-care personnel are trained to respect privacy and to practice confidentiality with their patients; no one is subjected to procedures or treatment without their full consent (Brand et al, 2014). A study conducted in Kwa-Zulu Natal and Mpumalanga by Amnesty International (2014) revealed that pregnant women fear that health-care workers will not keep their HIV status confidential, they perceive HIV testing to be mandatory and fear that if they refuse to be tested they will be denied ANC services. This is because they are concerned about how to share the information with partners and families, in addition they fear discrimination, stigma, abandonment and other social and medical consequences of living with HIV (Amnesty International, 2014).

2.7 CULTURAL BELIEFS AND PREGNANCY

Cultural norms carry significant weight in women's decision-making, especially in the choice of the location of birth (Warren, 2010). Cultural barriers have been a significant determinant of health-care seeking behaviour in many populations.

Women from culturally and linguistically diverse backgrounds who have no previous experience with the western health-care system may not understand the reasons for ANC visits, medical procedures and use of technology (Titaley, Hunter, Dibley & Heywood, 2010). They may not feel confident to ask questions or participate in discussions about their care plan or birth options. Different cultural beliefs may also influence aspects of ANC, such as the involvement of the father in pregnancy, consent to interventions, understanding of dates and times of appointments, and knowledge about medical aspects of pregnancy (Ngomane & Mulaudzi, 2012).

A study conducted in Nigeria revealed that problems affecting ANC including prevailing cultural norms where women needed their spouses' consent before receiving care. In addition, being examined by a male health-care worker was considered to be unacceptable. The implementation of focused ANC is far from being feasible in developing countries like Nigeria, owing to prevailing cultural norms, illiteracy and superstitions that promote patronage of unskilled birth attendants or traditional healers (Ekabua, Ekabua & Njoku, 2011).

Women are believed to have stronger trust in their cultural practices than in the ANC services that are rendered by skilled health-care workers (Titaley et al, 2010). In a

study conducted in Bohlabele district by Ngomane and Mulaudzi (2012) it was clear that the cultural beliefs and practices of pregnant women influence their attendance of antenatal clinics. Factors such as being bewitched caused delays in attendance at ANC facilities. Women were found to be using herbs to preserve and protect their unborn babies from harm. They trusted the knowledge of traditional birth attendants and preferred their care and expertise to the harsh treatment they received from midwives in hospitals and clinics who were disparaging of their indigenous beliefs and practices (Ngomane & Mulaudzi, 2012).

According to the WHO (2015) many authors have recommended that cultural factors should be taken into consideration in the planning and delivery of services as an important step in reducing maternal mortality and effective service uptake. It is known that in various regions of the world, some interventions have been implemented to address cultural factors that affect the use of ANC services; however, the literature has not been synthesised.

2.8 SUMMARY

In this chapter the literature review included an overview of ANC, the strategies which government has put in place to improve the utilisation of ANC services, cultural beliefs and pregnancy, knowledge and attitudes of pregnant women towards ANC and the perceived barriers to antenatal care; this included the awareness and acceptance of pregnancy, accessibility of ANC services and privacy in health-care facilities. Pregnant women's knowledge, attitudes and cultures about ANC in general were also discussed.

The literature reveals that lack of knowledge is one of the factors that delay women or prevent them from utilising ANC services. Conducting studies like this demonstrate the need not only to inform women and their families about danger signs during pregnancy and symptoms of problems but also to provide them with the information and skills they need to make informed decisions about when to seek health-care and from whom.

While the literature is limited with regard to the South African context, a number of studies have been conducted in other countries in Africa, mostly in Nigeria; however, overall little qualitative research studies (Maputle et al, 2013, Igbokwe, 2012,

Maluleke, 2018) has directly addressed the knowledge of and attitudes to ANC of pregnant women.

The next chapter will discuss the methodology and research design utilised in this research.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The previous chapter presented the literature reviewed on the topic under study, and this chapter outlines the methodology that was used. The discussion includes the research design, study population with its eligibility criteria, sampling, data collection method and instruments used, data analysis method, trustworthiness and ethical considerations. According to Burns and Grove (2014) methodology includes the design, setting, sample, methodological limitations and the data collection and analysis techniques in the study.

3.2 RESEARCH DESIGN

A research design is described by Vogt, Gardner and Haeffele (2012) as basic methods that a researcher can use to collect evidence used to make conclusions regarding an issue under investigation. The main purpose of the research was to determine the knowledge and attitudes of pregnant women in the Mbombela Municipality. The researcher's emphasis was on studying human action in its natural setting, through the eyes of the pregnant women, emphasising detailed description and understanding phenomena within the appropriate context (Maree, 2016). Thus the approach of the study can be described as qualitative, explorative, descriptive and contextual. This design was deemed the most appropriate in order to answer the research questions and reach the indicated objectives.

3.2.1 Qualitative research

A qualitative research approach was used, as in the enquiry process the researcher developed a complex, holistic picture of the situation among pregnant women in Mbombela, analysed words, reported detailed views of informants and conducted the study in a natural setting. The researcher attempted to capture the human experience within the context of those who experienced it (Creswell, 2014). The present research can be described as qualitative because it was concerned with the exploration of the knowledge and attitudes of the participants.

Key characteristics of qualitative research:

- To explore and understand a central phenomenon, which is the concept explored in a qualitative research;
- The research questions are general and broad, and seek to understand participants' experiences with the central phenomenon; participants were asked to describe their knowledge according to their understanding.
- The sample size is small and purposefully selected from those individuals who have the most experience in the studied phenomenon; the pregnant women were purposefully selected to explore and describe their knowledge and attitudes towards ANC services.
- The qualitative researcher collects words and images about the central phenomenon; data was collected qualitatively through individual in-depth interviews from the participants.
- The data is collected from people immersed in the setting of everyday life in which the study is framed; data was collected from the pregnant women in their respected PHC facilities where they receive their ANC services.

In qualitative research the researcher asks the participants broad, open ended questions to allow them to share their views about and knowledge with the phenomenon (Maree, 2016). Qualitative research does not focus on the objective truth (truth which is the same for other people), but rather on what and how participants perceive or understand the truth, as well as the participants' subjective perceptions and experiences of the social phenomena (Savin-Baden & Major, 2012).

Another reason the research can be regarded as qualitative, is that the researcher allowed participants to respond in a way that they felt appropriate, and tried to interpret what she observed and captured concerning the decisions, values, beliefs and actions of participants with regard to ANC services within their social world.

Qualitative field research is effective for studying subtle nuances in attitudes and behaviour (Babbie, 2013). This is because it is mostly associated with words, language and experiences rather, than measurements, statistics and numeric numbers. The findings of the study were not quantified nor produced by statistical procedures; instead they produced detailed descriptions and understanding based on the information obtained from the participants.

3.2.2 Explorative research

Explorative research is conducted to find out more about a topic, and to familiarise a researcher with a particular topic (Babbie, 2013). It is concerned with why phenomena occur, as well as the forces and influences that drive their occurrence. Exploratory research is conducted to gain new insight, discover new ideas and increase knowledge about the phenomena (Burns & Grove, 2014). Exploratory research can help to uncover relatively unknown research areas and to gain new insight of the phenomenon under study.

The study was exploratory because it explored the knowledge, attitudes and cultural practices of pregnant women towards antenatal care services in Mbombela Municipality.

3.2.3 Descriptive research

Descriptive research is conducted when little is known regarding the phenomenon under study. The descriptive design was selected for this study as it assisted the researcher in obtaining information from various cases in the sample population, and allowed the researcher to focus on the exact characteristics under consideration (Maree, 2016). The purpose was to describe the knowledge and attitudes of pregnant women towards antenatal care services.

The researcher observed and described actions and responses of participants as they occurred during the interviews. Situations were described naturally as they occurred, as were practices, beliefs, existing conditions, attitudes and ongoing processes within the context. The use of descriptive research in this study was well grounded due to the flexibility of the study as it allowed the pregnant women to describe their knowledge regarding antenatal care services (Burns & Grove, 2014). Descriptive design was chosen to aid in providing in-depth description of pregnant women's knowledge and attitudes towards ANC services.

3.2.4 Contextual research

Contextual research focuses on developing a deeper understanding of the design problem, identifying unexpected issues as well as underlying needs and opportunities (Babbie, 2013). Contextual research depicts the body, the world and the concerns that are unique to each person and within which the person can be understood (Burns & Grove, 2014). The study was contextually bound to the unique

and specific setting and time where the research was conducted. The study was conducted in the participants' natural setting, at the specific PHC facilities selected. The pregnant women were interviewed in their ANC facilities where they received ANC services.

3.3 STUDY SETTING

The study was conducted in Mbombela Municipality of the Ehlanzeni District in six selected PHC facilities; namely Bhuga, Kabokweni, Kanyamazane, Matsulu, Nelspruit and Msogwaba CHC. Mbombela has the highest population density in Ehlanzeni district and the majority of the population lives in formal urban areas or in villages in the tribal areas. According to census statistics (2011) the municipality has a total population estimated at 546 41. Most of the people in the area practice cultural practices like traditional healers and spiritual healers.

In the Mbombela Municipality there are two district hospitals and 31 Primary Health-care facilities which include six community health-care centres where the study was conducted. The distribution of health facilities throughout the municipality is aligned with the population distribution, and all 31 primary health-care facilities provide ANC services. Figure 3.1 shows a map of the Mbombela Municipality indicating the position of the primary health-care facilities.

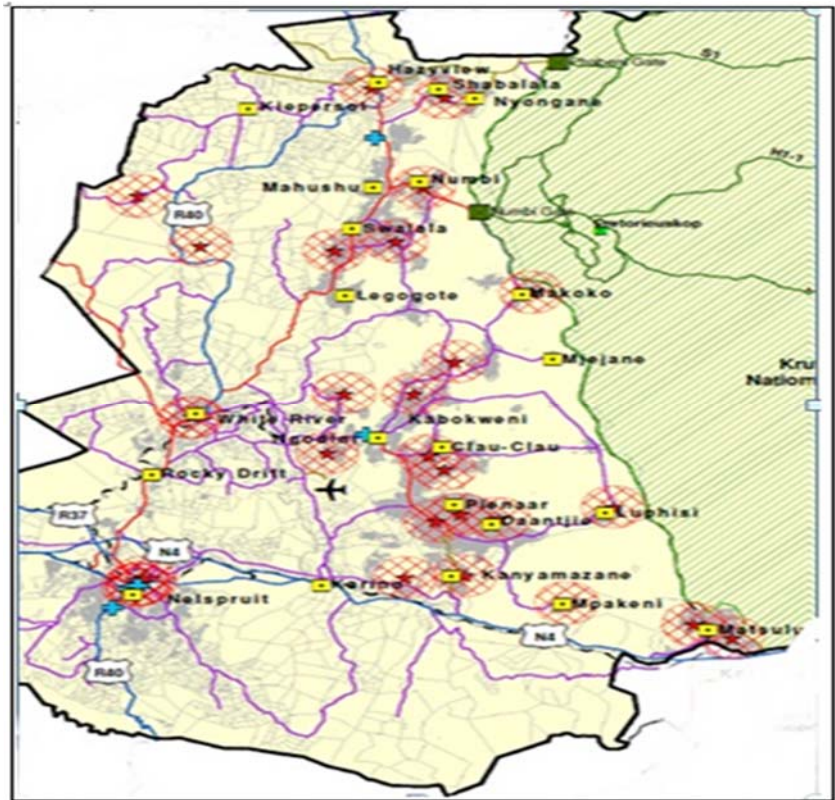


Figure 3.1 Map of the Mbombela Municipality showing its primary health-care facilities

3.4 POPULATION

The study population is the entire set of individuals having some common characteristics, it refers to all possible participants who comply with the sampling criteria for inclusion in the research study (Burns & Groove, 2014). The population for the present study consisted of all pregnant women attending ANC services in PHC facilities in the Mbombela Municipality.

According to Polit and Beck (2012) the target population for a study is the entire population in which a researcher is interested and to which she or he would like to generalise research results. In this study the target population was pregnant women who received ANC at the PHC facilities in the Mbombela Municipality. The accessible population refers to those members of the target population that the researcher could easily get hold of or who were convenient for the researcher to meet or contact (De Vos, Strydom, Fouche & Delport, 2011). The accessible population was pregnant women who receive ANC at the six selected PHC facilities.

During 2016/ 2017 (April 2016-March 2017) there were approximately 4290 pregnant women who attended ANC in these facilities (DHIS, 2017). The researcher ensured that all participants meeting the eligibility criteria were given a chance to participate in the study (Polit & Beck, 2012).

It was critical that the researcher should carefully define and describe the population and specifically stipulate criteria for inclusion and exclusion. Eligibility criteria included a list of characteristics essential for eligibility and the exclusion criteria were those characteristics that could cause an element to be excluded from the target population (Burns & Grove, 2014).

In this study the criteria for inclusion were:

- Being pregnant at the time of data collection;
- Receiving ANC at one of the selected PHC facilities;
- Being able to give informed consent.

Criteria for exclusion were:

- Inability to give informed consent;
- Pregnant women not receiving ANC at the selected facilities.
- Pregnant women presenting in labour at the time of data collection.
- Pregnant women who have never experienced ANC

3.5 SAMPLING

Sampling refers to the researcher's process of selecting a sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Brink, Van der Walt & Van Rensburg, 2012). Sampling was done to select the municipalities, health institutions and participants for this investigation.

3.5.1 Sampling of municipality and institutions

Non-probability, purposive sampling was used to select the municipality and institutions. As mentioned above, there are five municipalities in Ehlanzeni district namely, Nkomazi, Mbombela, ThabaChweu, Umjindi and Bushbuckridge. Mbombela Municipality was selected since it has the highest ANC utilisation rate of all the municipalities but it has a low utilisation rate of women before 20 weeks of pregnancy.

Thus, the study was conducted in the Mbombela Municipality in the six PHC facilities with the highest rate of attendance for ANC. The six facilities chosen were all Community Health-care Centres, meaning that they operate 24 hours a day and women are booked for ANC on daily basis. Despite the high attendance figures, it was alarming to learn that there was no facility with a 100% rate of first antenatal visits before 20 weeks of pregnancy. Between April and May, 2017 the attendance rate of women who were less than 20 weeks pregnant were as follows: Bhuga CHC, 57.4%; Kabokweni CHC, 54.4%; Kanyamazane CHC, 76.2%; Matsulu CHC, 86.3% and Nelspruit CHC, 77.8%. Hence it can be accepted that the facilities were purposively chosen.

3.5.2 Sampling of participants

Non-probability, purposive sampling was used to select the pregnant women to participate in the study. Purposive sampling simply means that participants were selected because of some defining characteristics that made them the holders of data needed for the study (Maree, 2016). According to Neuman (2011), a purposive sample is selected on the basis of knowledge of the population and participants and is based on the purpose of the study.

In this study the sample was pregnant women attending ANC at the selected PHC facilities. The midwives providing ANC services in the facilities informed the women attending ANC about the study and those who were eligible were asked to participate in the study.

3.5.3 Sample size

Eighteen pregnant women were interviewed. The size was determined by data saturation at participant Number 18. Data saturation was reached after an average of three women were interviewed in each PHC facility.

3.6 DATA COLLECTION

Qualitative data was collected by means of in-depth interviews. The researcher had a two-way conversation in which she asked the participants questions to learn about their ideas, beliefs, opinions and behaviours (Maree, 2016).

3.6.1 Data collection method

In-depth individual interviews were conducted with the participants in order for them to elaborate on their knowledge of ANC. In-depth interviews are useful when a researcher needs detailed information about a person's thoughts or behaviour or wants to explore issues in depth (Babbie, 2013).

3.6.2 Data collection process

After receiving permission to conduct the study from the University of Venda ethical committee and from the Mpumalanga Department of Health, the researcher called the managers of the selected PHC facilities to make appointments. The data was collected between April and May 2017 by the researcher.

The researcher visited the facilities early in the morning on the arranged days with the facility managers. The midwives providing ANC at the selected facilities informed the pregnant women about the study and more details of the study were given to those who were eligible to participate. Participants were given an opportunity to ask questions and their questions were answered before they signed the consent form.

The women were informed that the study was not part of their ANC follow-up routine, and that their participation was voluntary; no one could force them to participate if they did not want to. They were also informed that they could withdraw from the study at any time, even during interviews, if they did not wish to continue.

In-depth individual interviews were conducted in a private room after the women had been attended to by the midwives. The interviews took between 20 and 40 minutes. The benefit of face-to-face interviews is that they enabled the researcher to gain the cooperation of the participants by establishing a relationship with them, which facilitated high response rates (Maree, 2016). Individual interviews helped to reveal information that would have remained unknown due to the participants' fear of being identified or judged. Such sensitive information included the attitudes of nurses towards them and their traditional practices.

A tape recorder was used to record the interviews to make sure that the researcher captures accurate and complete information. In addition, field notes were taken by the researcher to support the recordings. The researcher observed the participants during the interviews to identify non-verbal body language cues.

The discussions were started with two open-ended questions. Open-ended questions are used in order to obtain responses in the participants' own words (Babbie, 2013). The questions were prepared in the participants' own language (Siswati) for those who did not understand English to promote understanding and to gather valid and reliable data. Fortunately the women interviewed had some level of education obtained and they could understand English. The questions were:

Can you tell me what is your knowledge regarding ANC services?

How do you feel about attending the ANC facility?

To seek clarity or more information, follow-up questions emerged from the information that was given by the participants. The following probing technique was used to follow-up information:

Basic probing - the researcher repeated questions to get participants back on track when they seemed to be getting off the topic under study.

Explanatory probing - the researcher tried to get clearer understanding of what participants said or from their incomplete statements. The interviewer asked questions like "Can you give an example of....?" "Can you explain what you mean when you say....?"

Silent probing - when the participants took long to respond, the researcher maintained silence and waited for the participant to break the silence.

Reflecting - the researcher repeated what the participant said to help her think of what she had just said. For example: "In other words you mean that....?" "What you are saying is....?"

3.7 DATA ANALYSIS

Data analysis refers to the systematic organisation and synthesis of the research data, it is conducted to reduce, organise and give meaning to data (Burns & Grove, 2014).

The researcher started analysing the data immediately after conducting the interviews. After the interviews the researcher listened to the audio tape to access the participants' responses and content of the interviews and transcribed the interviews (verbatim transcribed), non-verbal responses were included in the

transcript. Creswell (2014) describe transcription as a process of converting audio recordings to text data to facilitate the process of data analysis.

Data was analysed by means of coding, with the help of the analytic hierarchy. Coding is described by Maree (2016) as the process of reading carefully through the transcribed data, line by line and dividing it into meaningful analytical units. Analytic hierarchy refers to the process through which qualitative findings are built from the original raw data. Generic and specific codes were defined by the researcher to identify the variety of topics that the participants mentioned. The researcher's personal feelings about the phenomena under study were bracketed and put aside. The recordings and notes from the interviews were transcribed.

The first stage of the data analysis involved data management. A set of themes were generated and concepts, according to which the data were labelled, were sorted and synthesised. In this process the categories were refined, dimensions were clarified and explanations were developed. There was constant revisiting of the original or synthesised data to search for new clues to check assumptions or identify underlying factors (Ritchie & Lewis, 2013).

Ritchie and Lewis (2013) note that after generating and applying a set of themes and concept at data management stage, the researcher makes use of the synthesised data to identify key dimensions and maps the range and diversity of each phenomenon. In this stage the two features of qualitative data were emphasised. First, language: the actual words used by participants portrayed how the phenomenon was perceived, how important it was and what richness or colour it held. Second, substantive content of people's accounts was sensitively captured and reviewed so that the fine detail of different perspectives or descriptions could be understood.

The figure below shows the process used during data analysis

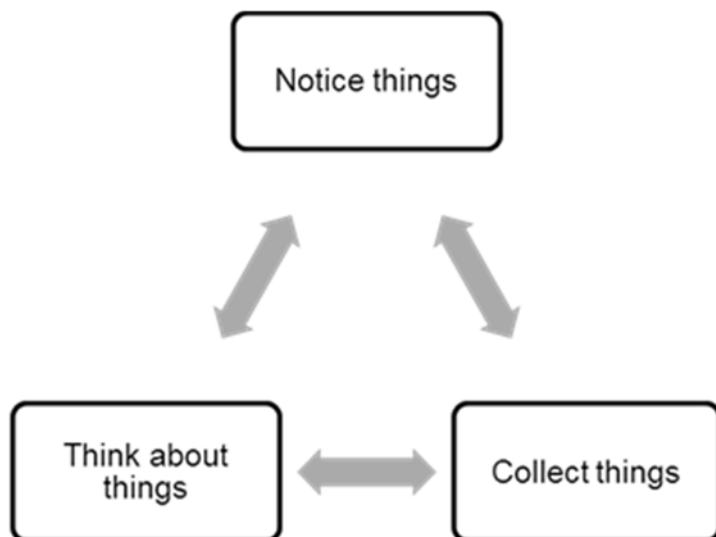


Figure 2.1 Data analysis process (Maree, 2016)

The figure above show the process that was used during data analysis. The researcher tried to make sense of the data by systematically looking through it, grouping together similar ideas and labelling them. This helped the researcher to get to know the data better and to organise their thinking. The steps were repeated until the themes and sub-themes were identified.

3.8 TRUSTWORTHINESS

Trustworthiness establishes the validity and reliability of qualitative research (Talbot, 1995). According to Brink *et al.* (2012) trustworthiness is a way of ensuring data quality or rigor in qualitative research. Trustworthiness refers to the way in which the inquirer is able to persuade the audience that the findings in the study are worth paying attention to and that the research is of high quality (Maree, 2016). This model proposes four criteria for developing trustworthiness of a qualitative study: credibility, dependability, conformability and transferability (Polit & Beck, 2012).

3.8.1 Credibility

Credibility is the assurance that the researcher's conclusions stem from the data collected (Maree, 2016). In essence, credibility refers to the truth of how the participants know and experience the phenomenon. In this study confidence in the truth was established through:

- **Prolonged engagement** - to ensure the researcher's prolonged engagement with participants, enough time was spent with the participants during

community entry and to establish rapport and to develop trusting relationships.

- **Persistent observation** - the researcher continuously observed participants to identify any information during the data collection process, including facial expressions and body language.
- **Peer debriefing** - this was done with the designated supervisors, as they assisted in examining the findings or steps taken during the research process.
- **Referential adequacy** - a tape recorder was used to document the verbal interviews (raw data) to make sure that the data collected was adequate; in addition, observations were noted down.
- **Member checking** - the data, analytic categories, interpretation and conclusions were presented to the participants after data analysis to secure their reactions and assess the adequacy of the results. This also gave the researcher the opportunity to correct notes that were perceived as wrong interpretations.

3.8.2 Transferability

Transferability refers to the extent to which the findings can be applied to other contexts or with other respondents (Babbie & Mouton, 2010).

- **Dense description** - In this study transferability was demonstrated by the researchers' emphasis on studying human action in its natural setting and through the eyes of the actor, also by her emphasising sufficient detailed descriptions and understanding phenomena within the context.
- **Purposive sampling** - As the aim of the study was not to generalise, purposive sampling was used to maximise the range of specific information obtained from and about the particular context (Brink *et al.*, 2012). The sample (pregnant women) was purposefully selected in terms of the knowledge they had about the ANC services.

3.8.3 Confirmability

Confirmability is concerned with establishing whether the data represent the information provided by the participants and if the interpretation of data is not fuelled by the researchers' imagination (Brink *et al.*, 2012). The purpose of confirmability is to illustrate that the evidence and thought processes would give another researcher

the same conclusions as in a similar research context (Streubert-Speziale & Carpenter, 2011).

The criteria for confirmability has to do with the level of confidence on which the research findings are based, and the participants' narratives and words, rather than potential researcher biases. To make sure that the information was neutral and free of bias, in this study:

- A tape recorder was used to record the in-depth individual interviews;
- The findings of the study were based on the analysed raw data;
- Early intentions, purpose and objectives of the study were outlined;
- An audit trial was conducted; each phase of the research process including data collection, data analysis and interpretation of results was carefully planned and detailed;
- The conclusions drawn are supported by analysed data.

3.8.4 Dependability

Dependability refers to the stability or consistency of data over time. It is the provision of evidence that if the study were to be repeated with the same participants in the same context, the findings would be similar (Brink *et al.*, 2012).

According to Polit and Beck (2012), the stability of data over time is obtained with stepwise replication and an inquiry audit.

- **Stepwise replication** - In the process of stepwise replication all the steps were replicated during data analysis, data was coded and recorded again, the researcher checked the codes, themes and categories, after which the supervisor and co-supervisor compared and examined the findings.
- **Inquiry audit** - In qualitative research the researcher and participants are assessed for consistency. In order to confirm whether the findings of the research were dependable, they were checked and audited by means of an inquiry audit. In this study the auditor was the external reviewer who examined the data, the process of investigation, findings, interpretation and recommendations.

3.9 ETHICAL CONSIDERATIONS

Ethics is a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Polit & Beck, 2012). To ensure that ethical issues were taken into consideration the researcher took the following steps:

Permission to conduct the study - A letter was written to the Mpumalanga Department of Health to request authorisation for the researcher to visit health-care facilities and to interview patients. A letter of authorisation was obtained from the department (Annexure F). Ethical clearance to conduct the study was received from the ethical committee of the University of Venda (Annexure E).

Appointments and permissions to visit health facilities were arranged with the respective clinic managers by means of a letter in which the study and the process to be used were explained (Annexure A). Permission from health care facility managers to visit facilities was obtained verbally.

Anonymity and confidentiality - Anonymity was provided in a way that the participant's specific responses and information would not be linked in any way to the participants (Meyer, Van Niekerk, Shangase & Naude, 2009). Participants names were not mentioned during the interviews and numbers were used. The researcher made it clear to the participants that the information they provided would be kept confidential and would not influence the service that they received from the facilities. The researcher and supervisors were the only people with access to the information and all the audiotapes would be destroyed at the completion of the study.

Informed consent - Interviews were conducted in accordance with the ethically approved protocol of informed consent. As approved by all ethics review committees and institutional review boards, participants were presented with a consent form to read through as well as an information sheet in which the research process was described. The participants who were willing to be involved in the study signed the consent forms. One informed consent form was written in English (Annexure C) while another was in Siswati (Annexure D) for those who could not read English.

Right to self-determination - Self-determination means that the participants had the right to decide whether they wanted to participate or not. Participants were informed that the interviews were voluntary and no compensation would be provided

in return for their information. They were also informed that they could withdraw from the study at any time if they wished to do so, even after they had signed the consent form.

Privacy - Privacy refers to the freedom that a participant has to determine the time, circumstances and extent to which private information will be shared (Burns & Grove, 2014). The information provided by the participants is kept private. The participants were informed in the consent form that audiotapes would be used, and they will be kept private in a secured place where only the researcher will have access.

Non-maleficence - this means that no harm, wrong doing, injury or ill effects may be inflicted on participants as a result of their participating in the research (Brink *et al.*, 2012). The researcher ensured that participants are not subjected to psychological or physical harm. The questions were asked as sensitively as possible to avoid discomfort.

Justice - participants should be treated equally and fairly (Burns & Grove, 2014). Participants were treated fairly and equally, all the participants who were eligible to participate in the study were given a chance. No one was excluded unreasonably in the study.

3.10 SUMMARY

In Chapter 3 the research methodology which included the research design, setting, population, sampling, data collection process, data analysis procedure, trustworthiness and ethical considerations used in this research was discussed. The study is described as qualitative, descriptive, explorative and contextual in nature as the researcher used in-depth individual interviews to collect data. In-depth individual interviews were helpful in gathering information about the knowledge and attitudes of pregnant women.

The data was analysed qualitatively using the open coding method as it was collected. The following Chapter 4 presents the analyses of the data and discussions of the findings of the research based on the themes and sub-themes that emerged.

CHAPTER 4

PRESENTATION AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

In the previous chapter the research methodology which was used in the study was discussed. In this chapter the results of the study are presented and discussed. Themes and sub-themes that emerged from the data analysis are discussed. Numerical codes were used to distinguish participants. The results from previous research were compared with the findings from this study. The purpose of the study was to determine the knowledge and attitudes of pregnant women towards ANC services in Mbombela Municipality, Mpumalanga Province, South Africa. The study further explored how traditional practices influence the management of pregnancy. The objectives of the study were to:

- Explore the knowledge of pregnant women regarding ANC in Mbombela Municipality;
- Describe the attitude of pregnant women towards ANC services;
- Explore the pregnant women's traditional practices influence in relation to the management of pregnancy.

Data were collected from eighteen women; all eligible participants were included in the study. Data were collected until the saturation of information was reached. The data collected from the participants were processed and analysed. The results are presented and discussed in this chapter.

4.2 PRESENTATION OF RESULTS

The study was carried out in six PHC facilities in Mbombela Municipality namely, Matsulu, Nelspruit, Bhuga, Msogwaba, Kanyamazane and Kabokweni Community Health Care Centres. Three pregnant women participated in each of the selected facilities, with a total of eighteen women participating. The age, number of pregnancies and educational level of the participants are discussed in this section. This was used to determine any associations with the other pregnant women.

4.2.1 Demographic data of the participants

The age of the participants ranged between 18 and 38 years. There was no association between the age and the knowledge of pregnant women about ANC, as many of the participants booked late and they gave vague explanations about the procedures of ANC. However, it has been shown in previous studies that the utilisation of maternal health-care by pregnant women is influenced by factors such as age, parity, satisfaction with health-care services, poverty and educational levels (Mwangakala, 2016). Refer to table below:

Table 4.1 Demographic data of pregnant women attending ANC in Mbombela Municipality

Characteristics	Category	Frequency
AGE	18-19 years	01
	20-29 years	09
	30-34 years	05
	35+ years	03
NUMBER OF PREGNANCIES	1 st pregnancy	3
	2 nd pregnancy	11
	3 rd pregnancy+	4
EDUCATIONAL LEVEL	Tertiary education	3
	Secondary education	10
	Primary school	5

Participants were asked to mention the number of pregnancies they had including the current one; this was conducted to determine if those who had been pregnant before had more knowledge regarding ANC services than those who were primigravidas (first time pregnant). It was encouraging that for many of the women it

was not their first pregnancy, hence they are believed to have some experience regarding pregnancy. Parity retains a significant association with knowledge of ANC. Women who have had previous pregnancies have some sort of knowledge regarding ANC unlike those experiencing their first pregnancies.

Participants were also asked to mention their highest educational level to determine if those who were educated had more knowledge about ANC and if they attended ANC facilities earlier than those who were not educated. All of the women who participated had some education which meant they were able to read and write and they were able to use most of the sources (booklets, brochures, media or newspapers) to access knowledge regarding ANC services.

While all the pregnant women had obtained some educational level, the women sought ANC later in pregnancy. The effect of education remains significant in studies like this, since knowledge is gained through experience or education. In some studies it was revealed that women with adequate education are likely to initiate ANC earlier compared to those without education. Findings in a study conducted in Zambia found that women who were well-informed about ANC are likely to book within the recommended time (Banda, Michelo & Hazemba, 2012). Similarly, Agha and Williams (2016) in their study conducted in Pakistan found that deliveries or childbirth in health-care facilities increased with education, 92% of women with secondary or higher education were delivered in health facilities compared to 52% of women who did not have formal education.

4.3 Presentation of themes and sub-themes/ discussion of results

During data analysis four themes and twelve sub-themes emerged. The major themes and sub-themes are indicated below. A systemic framework approach of data analysis was adopted to identify themes and sub-themes from the transcribed interviews. The key themes were categorised on the basis of the pregnant women's knowledge, attitudes and traditional practices regarding ANC services. The following Table 4.2 shows the themes and sub-themes that emerged from data analysis.

Table 4.2 Themes and sub-themes that emerged from data analysis

Theme 1: Attendance of ANC facilities	1.1 Knowledge for time of ANC booking
	1.2 General reasons for attending ANC facilities at the stated trimester
Theme 2: Knowledge of pregnant women related to ANC	2.1 Health education during ANC services
	2.2 Knowledge of the benefits ANC services
	2.3 Knowledge regarding procedures of ANC services
	2.4 knowledge of the importance of ANC services
Theme 3: Attitudes of pregnant women related to individual perceptions	3.1 Perceived barriers to utilising ANC services
	3.1.1 Health-care workers' attitudes
	3.1.2 Long waiting times in health-care facilities
	3.1.3 Privacy in health-care facilities
	3.2 Attitudes of pregnant women related to attendance of ANC services
Theme 4: Traditional practices and management of pregnancy	4.1 Traditional practices followed during pregnancy
	4.2. Traditional medication taken by pregnant women during pregnancy
	4.3 influence of traditional practices in management of pregnancy

4.3.1 Attendance at ANC facilities

In this section the gestational age at the time of ANC booking, the reason for attending ANC and reasons for starting at the given trimester are discussed. It was to determine whether women knew which time was best to start ANC and if they had information on when to start ANC before falling pregnant.

4.3.1.1 Knowledge of time for ANC booking

Participants were asked to indicate how many weeks had passed before they first visited an ANC facility; this was conducted to determine if women knew in which trimester they had to start their antenatal care. The study showed that only four women started ANC in their first trimester, thirteen in their second trimester and only

one woman in her third trimester. The responses from the pregnant women indicated that they did not really know on which time was best to initiate ANC.

“No I didn’t know when I had to start, I have never come across that information even here at the clinic...I started attending when I was four months pregnant but I had found out that I was pregnant at three months of gestation” (Participant 5).

“I started attending when I was five months....but I think you have to start when you are three months pregnant, I just decided to start at five months because I thought it was the right time for me since I am not sick” (participant 13).

The best time for initiation of ANC is when the woman first finds out that she is pregnant, which is usually before ten weeks of gestation (NDoH, 2016). When women are found to be pregnant they should immediately report to an ANC facility; however, most women report for their first ANC visit after twenty weeks of gestation.

According to the WHO (2016) and ANC guidelines (2016) it is recommended that women start ANC in the first trimester of pregnancy. ANC services are provided in public sectors and they are rendered for free. Although there are recommendations that women must start ANC in their first trimester of pregnancy, this study found that most women start their ANC in their second trimester of pregnancy. The prevalence of late ANC booking is slightly the same with what was reported by Tshabalala (2012) in East Ekurhuleni sub-district; it was documented that most women start ANC in their second trimester, 31% started ANC in the first trimester, 63% started in their second trimester and only 6% started in their third trimester. It is clear that those who started ANC in their third trimester did not benefit much from the ANC programme and they do not meet the required four visits of ANC as recommended by the WHO.

Knowledge regarding ANC services will include women knowing when to start ANC. According to the research findings women do not start ANC at the recommended time and this is the same challenge which is faced globally (Ngxongo & Sibiyi, 2013). Statistics from the Demographic Health Survey (DHS) show that more women still make their first ANC visit after twenty weeks of pregnancy and do not make the required four visits as per WHO recommendations.

4.3.1.2 Reasons for attending ANC at the stated trimester

Participants were asked to indicate the reason for attending ANC to check if there were other reasons that made them to start ANC at the stated trimester or it was due to their lack of knowledge that made them to seek ANC services late. Multiple responses emerged on why women started ANC in the stated trimester;

“I started attending when I was four months pregnant, I didn’t want to come here earlier because I would get tired of coming here every month. The nurses say that you must start attending immediately when you miss your first menstrual period” (participant 10).

Many women struggle to accept their situation and they end up feeling that they are not ready to make changes in their lives. One participant responded as follows:

“I was confused by so many things, the fact that I had to be a mother again, I was not ready. I was not accepting this pregnancy that’s what delayed me” (Participant 6).

It was revealed that some women were aware that they must start ANC as soon as they found out that they were pregnant but they do not see the importance of starting ANC earlier.

Similar results were reported by a study that was conducted by Maputle, Lebese, Khoza, Shilubane and Netshikweta (2013) about the knowledge and attitudes of pregnant women towards ANC services in Tshino village, Vhembe district in South Africa which found that pregnant women showed inadequate knowledge about the utilisation and importance of booking ANC visits. The pregnant women said that they booked ANC whenever they felt like it, even if it is after four months. They felt it is important to start ANC but they were not aware why it is important to book before the end of the 12th week. They were not even aware of how many times they should attend ANC facilities before giving birth.

One of the reasons for women starting ANC late is that they hide the pregnancy from their families or loved ones and they lack support from their families especially if the pregnancy was unplanned. This is supported by a response from one participant:

“It was already late when I started attending, but to my understanding you get to know that you are pregnant around three months and that is when you are supposed

to start... but I started when I was four months pregnant because I was hiding the pregnancy from my family, I did not want them at home to know that I was pregnant so when I went back to school I started attending because I was afraid that if I start here they were going to see the maternity case record at home”.

Participants who started ANC late said that one of the reasons for starting ANC was to obtain a maternity case record because they thought they would not be assisted when they reported for the delivery of their babies without a maternity case record.

Participant 5 said:

“I come here because I feel like I have to come to have the maternity case record because if you don't have it they will not attend to you during delivery of the baby. They will ask you how are they going to assist you during delivery without having your history” (Participant 5).

Similar results were reported by a study conducted by Kaswa, Rupesinghe and Longo-Mbenza (2018) about exploring the pregnant women's perspective of late booking of antenatal care services at Mbekweni Health Centre, It was revealed that most women's primary reason for seeking ANC was to receive an ANC attendance card that is required to deliver at the health facility.

4.3.2 Knowledge of pregnant women related to ANC services

Although the participants mentioned why they started ANC in the stated trimester, it was necessary to investigate their knowledge level regarding ANC services. This section will specify the health information related to ANC services received by pregnant women during their ANC visits. The knowledge of pregnant women in this regard was assessed on how women understood the procedures of ANC, ANC visits, the benefits of ANC services, danger signs in pregnancy and the importance of ANC services. This was conducted to describe the knowledge they had regarding ANC services.

The pregnant women were not aware of when they were supposed to start their ANC visits; they just started when they felt it was the right time to do it. The knowledge of pregnant women is a major factor in determining the utilisation of ANC services.

4.3.2.1 Health education during ANC services

Although the women indicated that they could not remember being taught anything regarding ANC services during their ANC visits, some revealed that they received health education regarding breastfeeding, eating healthy food during pregnancy and practising safe sex to prevent transmission of diseases to their unborn children. They were also a part of a mom-connect service which provided them with messages on their mobiles that helped them and gave them guidance throughout their pregnancy.

However, the women reported that they did not remember receiving any sort of health education since they had started attending ANC facilities. Participants reported as follows:

“No I don’t remember receiving any health education regarding ANC services in this clinic” (participant 7).

“I come here to get knowledge regarding pregnancy, things that you come across when you are pregnant but we don’t receive that information here. Maybe it is because we do not ask questions, but they do not teach us anything here and you cannot ask a question without being taught first” (participant 11).

Even those who had been pregnant before they said that they did not remember receiving health education during their previous pregnancies.

“They don’t tell us anything, they just tell us to go and urinate. After they had checked the urine they tell you to get naked and start examining your abdomen but they don’t explain why they are doing that. Even when we are on the queue waiting to get in the consultation rooms they have never come to us and gave us health education...this is my second pregnancy and I have been attending ANC at this facility I have never come across any health education” (Participant 8).

None of the women interviewed spoke about vital maternal health information such as danger signs in pregnancy and detailed procedures of the services received during ANC. These findings are similar as those from a study conducted in Tanzania which showed that only 53% of pregnant women were informed about the danger signs of pregnancy during their ANC visits (Mwilike, Nalwadda, Kagawa, Malima & Mselle, 2018). Similar findings were reported by a study conducted in Tanzania that the majority of the pregnant women in the study population were barely offered any

maternal health information when they visited ANC facilities and this was due to the inadequate conditions of the health facilities and the poor working conditions which affected the provision of quality maternal services and of health information provided to the pregnant women (Mwangakala, 2016).

All health-care facilities must offer health education. Under normal circumstances women must learn about ANC and other maternal health issues when they visit the clinic for ANC services. The WHO (2015) states that the basic maternal health information provided to women by skilled personnel must include health information on family planning, danger signs in pregnancy, nutrition and diet, childbirth, labour and breastfeeding.

Pregnant women must be provided with information verbally by health-care professionals or through leaflets, pamphlets or illustrated cards provided by the government. The information must also include educating the women about the five danger signs in pregnancy which is: reduced foetal movement, experiencing severe headaches, abdominal pains, vaginal fluids and vaginal bleeding.

The South African government acknowledges that adequate staffing and quality of care is necessary to improve maternal survival and other key objectives of the primary health-care system. Current staff shortages have raised concerns about the quality of ANC services provided. South Africa is struggling with a shortage of health professionals in the public sector (Amnesty international, 2014).

Despite all the challenges that are faced by the health-care providers, there is still an opportunity to provide maternal health information to these women since they spend more time waiting in queues before they are given attention. Women should receive health education about pregnancy including outcomes, danger signs in pregnancy, nutrition, family planning and other services when they visit ANC facilities (Mwilike *et al.*, 2018).

If women were provided with maternal health education by health care providers they would know when to start their ANC visits and when to seek help from skilled health-care professionals to avoid complications during pregnancy and to reduce maternal mortality. Health education is vital to pregnant women during pregnancy to improve their behaviour in seeking health-care. If women received proper health education during their visits to health-care facilities their view or reaction and behaviour

towards ANC services would be influenced and that would help them to improve their knowledge and health. Lack of provision of health education could partially explain why pregnant women still practise traditional procedures during pregnancy.

4.3.2.2 Knowledge of the benefits of ANC services

It was necessary to know if women knew if it was beneficial for them to attend ANC services to determine their level of knowledge. According to the results the priority benefit for women to start ANC was to know their HIV status followed by foetal growth monitoring, prevention of complications that may arise during pregnancy, to receive supplements and vaccines and also to gain more knowledge regarding pregnancy.

The participants said that the major benefit of attending an ANC facility was the HIV testing and counselling which is offered to every pregnant woman.

“I attend to find out if my baby is healthy and if I am also healthy because they check your blood pressure, HIV status, check urine for sugar and check if I do not have any diseases that I can transmit to my baby. Because if I stayed at home they will not know my HIV status and I will not have the maternity case record and they want it when you go for delivery” (Participant 1).

“ANC is helpful, they give you HIV counselling obviously you need it and we do it every three months and they give you counselling about breastfeeding and eating healthy food, you also become part of mom-connect group and they send you messages regularly” (Participant 2).

ANC was not perceived to be beneficial by some of the women. The women said they would prefer receiving ANC later on in pregnancy to avoid many repeated visits. Pregnant women who have no perception of the benefit of ANC tend to start ANC late.

“I come here to check if the baby is growing well because myself I know my status but I don’t understand the follow up dates why I have to come back on the dates that they give us, because the only thing that is different is my weight that keep increasing on every visit but other things don’t change” (Participant 6).

“I don’t think it is necessary, it is just useless, because you just come here, get naked they check you and check the urine, give you the supplements then you are

conducted that's all. They don't even explain why you are supposed to take the supplements. So what is the use of coming here earlier, coming here for nine months for nothing. I don't see the reason why I have to take the vitamins supplements every day because I get those vitamins from the food that I eat on daily basis. It's not like we are sick that we have to take supplements everyday" (Participant 8).

The findings from this study are similar to the findings by Carpenter (2010) which revealed that most women did not adhere to ANC information or seek to be attended by a skilled birth attendant because they were not fully aware of the benefits of skilled health-care during pregnancy. Most of them were aware of the barriers than the benefits which affected their attendance levels.

Those who had higher education perceived ANC to be beneficial while those who had a lower level of education did not (Carpenter, 2010). This may be due to the fact that they had other means of receiving maternal health informational, e.g. magazines or brochures, the internet (medical websites) and other media.

Pregnant women might delay seeking maternal health-care because they are not fully knowledgeable of the benefits of ANC services since that they are not given health education during their ANC visits. In a study conducted in Swaziland a health-care worker mentioned that owing to the shortage of health-care staff and the high number of patients, they barely had time to talk to pregnant women during ANC visits (Tsawe, Moto, Netshivhera, Ralesego, Nyathi & Susuman, 2015).

According to the WHO (2015) the major goal of ANC is to detect and manage complications during pregnancy, whether medical, surgical or obstetrical. As part of ANC the health-care provider must have a discussion with the woman and examine her for symptoms or signs of chronic or infectious diseases, congenital problems or other conditions such as HIV/AIDS, malaria, sexually transmitted infections (like syphilis), anaemia, diabetes, heart diseases, malnutrition or tuberculosis which may harm the health of the pregnant woman or the unborn child if they are left unattended.

It is necessary for pregnant women to start ANC early to meet the required number of eight visits as recommended by BANC plus and to detect complications earlier. Health-care providers need to provide these women with health education regarding ANC and its benefits for them to change their health seeking behaviour.

4.3.2.3 Knowledge regarding procedures of ANC services

Participants had general ideas considering the procedures of ANC services: palpating their abdomen to check the foetus and its position, urine testing, counselling and testing for HIV. Participants knew which procedures were performed during ANC services, However, they have limited knowledge regarding the importance of these procedures and the reason why they are performed.

“I can say that I understand fifty percent and the other I don’t understand them, I know they check the urine to check if you don’t have kidney problems, check blood pressure and if it is high they refer you to the hospital... I am not sure if they check the sugar levels in our urine but some of the things you just see them on Google, I use Google a lot” (Participant 3).

“When we come here they measure our abdomen with a measuring tape but I don’t know what they are measuring, they listen to the heartbeat of the baby, they check our blood pressure and we also do our HIV test. And if it happens that I am HIV positive they will give me treatment to prevent transmission to the baby. They check for diseases like STIs in the urine and if you have the disease they give you treatment so the baby cannot be affected” (Participant 7).

Although all the women knew about the ANC services provided, their description of ANC procedures was vague and some procedures were not mentioned, especially immunisation. In addition, it seems as if they could not understand why the procedures were done. This indicates that their level of knowledge regarding ANC services was limited.

The present study found that educated women understood the procedures better than those who were uneducated or who had a low level of education. This finding supports a report by a study conducted by Igboke (2012), who concluded that the educational status of pregnant women is an influencing determinant in the effective utilisation of maternal and child health services.

The objectives of ANC are to ensure the best possible pregnancy outcomes for women and their babies by screening for pregnancy complications, conditions such as HIV/AIDS, anaemia, mental health problems, sexually transmitted infections and hypertension, giving medication that may improve pregnancy outcomes, as well as ATT immunisation, iron supplements and calcium (NDoH, 2011).

It is important that the care provided to pregnant women should be of high quality. Most of the activities carried out during ANC in Mbombela are in line with recommendations of the WHO. Nevertheless, the women do not receive care in accordance with established standard care of the WHO, and maternal mortality continues to be a major challenge as most deaths seem to be related to inadequate maternal care. In most of the facilities health education regarding ANC procedures is not provided to women.

4.3.2.4 Knowledge of the importance of ANC services

Participants seemed to lack a full understanding of the importance of ANC services. Participants believed that they had to attend ANC facilities to monitor the growth and the health of their unborn foetus.

“I come here to check if the baby is safe from diseases and also to check if the baby is growing well and also to confirm that I will deliver a healthy baby” (Participant6).

“I don’t understand why I have to come here every month and it is tiring but I think it is necessary because I will be able to find out if the baby is fine” (Participant 7).

Previous studies indicate that well-educated women are more likely to utilise ANC than those who are less educated (Mwangakala, 2016; Tsawe *et al.*, 2015; Mkhari, 2016). Poor education leads to poor knowledge of the importance of ANC. On the other hand, extensive knowledge and usage of ANC services of educated women might be because they are more exposed to information on maternal health in the media, and as a result they have an adequate understanding of the importance of ANC.

The researcher argues that if women were provided with proper information on maternal health or even health education during their visits to health-care facilities they would have a better understanding of the significance of ANC. This would improve their attendance, since it is unlikely that they would improve their behaviour if they did not regard ANC as being important.

This finding is similar to that of a study conducted in India that found that educated women were more aware of almost all the aspects of ANC than uneducated women. As a result, they practised good nutrition and other matters while women with lower

education visited ANC clinics more regularly (Patel, Gurmeet, Sinalkar, Pandya, Mahem, & Singh, 2016).

There was no significant relation between experience and knowledge on importance of ANC. Those who had given birth before also attended ANC late and they did not know much about the importance of ANC services.

“I have not seen anything that ANC has helped me with because you just come here they check on you and give you medication after that you go home, they don’t even ask you if you are fine or not. I think that we should just stay at home and start attending when we are about to give birth or sick, I don’t see the importance of coming here earlier” (Participant 10).

“I attend because they say when you are pregnant you must attend, because if you come later on in your pregnancy the nurses will scold you. I don’t see the importance of attending unless you are sick, according to me we were supposed to stay at home and come here when we are sick or when it is time for delivery” (participant 12).

The researcher argues that unless these women are equipped with knowledge during ANC visits they will not understand the importance of ANC and they are likely to seek ANC services only later in pregnancy. Similar results have been reported by a study conducted in Tanzania by Mwangakala (2016) that found that lack of maternal health information and education at ANC clinics was the reason most women refused to admit the importance of ANC and the danger signs related to pregnancy, and that led them to under- or non-utilise skilled services.

The decision for pregnant women on whether or not to visit ANC facilities and to continue with their visits depends on the knowledge they have regarding ANC services. Delay in seeking or accessing health-care can be fatal to the pregnant woman and unborn baby. The pregnant woman’s choice to access health-care earlier during pregnancy is critical for a positive outcome. It is very important for pregnant women to be provided with information about maternal health and the disadvantages of delaying seeking maternal care for them to make informed decisions.

4.3.3 Attitudes of pregnant women related to individual perceptions

In the study context attitude refers to pregnant women affective feelings of like and dislikes towards antenatal care services. The attitudes of pregnant women were assessed about how they perceive ANC services, procedures, the importance of ANC services and their health-seeking behaviour. Pregnant women's perceptions regarding pregnancy or their personal experiences relating to ANC services determine their attitudes towards the services.

The pregnant women's previous or current experience to ANC services can be positive or negative. The women had negative attitudes towards the health-care providers which could have affected their attendance at ANC facilities. Health-care workers' attitudes play a great role in determining how pregnant women perceive ANC services and the bad attitudes form a barrier for utilising ANC services. This was supported by the participants.

4.3.3.1 Perceived barriers to ANC services

Possible barriers that prevented women from attending ANC facilities were raised during the interviews. Among others matters which were of concern in the study area were the nurses' attitudes towards patients, long queues in clinics, lack of privacy and patient confidentiality.

4.3.3.1.1 Health-care workers' attitudes

All women have a right to be treated with respect and dignity. The care which is provided to them should respect their dignity. Most of the participants mentioned that one of the things that put them off from visiting health-care facilities or made them delay ANC was the nurses' attitudes. The women said that they were sometimes badly treated by the nurses.

"Sometimes there are things that we don't like when we come here, like the nurses shouting at us because we come here looking for help but the nurses are moody sometimes...this is my second pregnancy, I have been attending ANC here, the nurses at this facility are moody especially the ones working at maternity section. I had to go and attend another clinic because of their attitude but because one of the nurses knew me from the other facility they told me to come back here since I have a file here...I had to take a taxi and go attend there to avoid what is happening here because you see now we have been here since morning but we will leave here

around five in the evening. These things affect us a lot because sometimes you feel like you can just leave without receiving any assistance” (Participant 6). This was reiterated by another participant:

“We are scared of asking the nurses anything since most of them they answer you with an attitude when you ask something. Most of them they frown when you ask them questions so you become scared to ask to ask them because you tell yourself that she/he will not answer you well. They get angry especially if they see that we are many, they start saying things like these patients are so many when are we going to finish working and they get angry, you even get scared of telling them your problems. We end up going to the private pharmacy and buy medications there” (Participant 8).

In a study conducted in Thulamahashe, in the Bushbuckridge sub-district, in Mpumalanga Province by Mkhari (2016) 56% of the respondents indicated that the reason why they visited ANC facilities late was the nurses’ attitudes.

“We do not ask anything, we are scared because some nurses are rude , they do not answer you well when you ask them questions so we just keep quiet, this is my third pregnancy and things have been like this” (Participant 1).

In the 2012 audit of health facilities, only 30% of health-care facilities were found to comply with the criteria for positive and caring staff attitudes nationally, and 25% in primary health-care facilities (NDoH, 2011).

Antenatal care must be made attractive to the woman and this can be achieved by the way she is treated during ANC visits. If the woman is treated roughly the likelihood of her not returning to the facility is very high and she will not be enthusiastic about the instruction given to her at the clinic (Sellers, 2011).

4.3.3.1.2 Long waiting times in health-care facilities

In addition to the unacceptable health-care workers’ attitudes the pregnant women mentioned that the long waiting times in health-care facilities kept them from visiting ANC facilities or made them delay seeking maternal health-care since they did not have time to wait for long hours at the health-care facilities as they had other important tasks to do.

In all the facilities that were visited the pregnant women were very disappointed with the time they spent in facilities before they could receive assistance or be seen by a health-care worker. This could result in them seeking ANC late. Several women mentioned that they preferred using private doctors but owing to the lack of financial support they couldn't afford it. Some pointed out that owing to the occasional long waiting times they felt they left without receiving the services.

“They need to improve, we come here early in the morning but they attend us very late, we get mixed with people who are sick while we on the queue but they attend the problem in time, we stay here for longer, we arrive early in the morning and leave late and things change every time we come here. Last we had our own queue to follow as ANC patients but now we mix with everyone who comes here even with those who are sick. Now it is eleven but we have not received help yet since we got here at 7 o'clock” (Participant 15)

“You come here early in the morning around six o'clock and you will receive help at five o'clock in the evening. The nurses here take their time to assist us, they go for their tea breaks, lunch breaks and even change shifts while we are just sitting here” (Participant 9).

These findings are similar to those of a study conducted in Thulamahashe, Mpumalanga by Mkhari (2016) who found that 79% of the respondents agreed that the reason they attended ANC facilities late was due to the long waiting times at the clinic. Delay in seeking maternal care and the poor quality of care provided in health facilities contributed to the continuing high rate of maternal mortality.

Women will consider a service poor or deficient if there is prolonged waiting time; waiting time is an important determinant of satisfaction with services. In a study in Bangladesh, clients considered reducing waiting time more important than increasing consultation time (Srivastava, Avan, Rajbangshi & Bhattacharyya, 2015).

Quality standards in health care are important because they help to improve population's health by measuring and addressing disparities in health care accessibility and outcomes (NDoH, 2011). Providing quality standards of care help health care users to make informed decisions and choices to identify what works and what does not work to facilitate improvement and prevent overuse, misuse or underuse of health care services.

4.3.3.1.3 Privacy in health-care facilities

Patients have a right to privacy and confidentiality. Health-care workers are trained to respect the privacy of patients; they have to ensure that a patient's privacy and confidentiality is protected and that information on the health status of the patient is not disclosed to third parties without the consent of the individual.

One of the factors that delayed women from visiting ANC facilities was found to be a lack of privacy and confidentiality, especially when visiting facilities nearer to home. This matches the response from Participant 4:

"...I ran away from clinic x because there was a nurse who did not keep my status confidential. I did not attend the clinic because of a certain reason and she just came in front of everyone at the queue and asked me why didn't I come to the clinic because now my baby has missed the nevarapine dose that he was supposed to get, that did not sit well with me. I became pregnant when my first baby was still young and the nurse asked me why was I back at the clinic so soon and she said that in front of everyone, the other people didn't know that my baby was still young. Now I ran away from that clinic and I have to take a taxi all the way to attend this clinic. There is no privacy there, I wish the department can put cameras so they see how they treat us, they don't know how to speak to people, from the matron to the staff. There is another woman outside who also ran away from that clinic because there is no privacy. We come here because there is no one who knows us here so no one can judge us" (participant 4).

Fear of breaches of privacy by health care workers can also have financial implications, as some people feel that they must attend a clinic further from their home to minimise the chance of meeting someone they knew. This was confirmed by a study conducted by Amnesty International in KwaZulu-Natal and Mpumalanga (2014) about the struggle to achieve maternal health. This included barriers to ANC in South Africa. Many women and girls who were interviewed said that their fears about lack of privacy and patient confidentiality in health facilities put them off visiting their local clinic and made them reluctant to access sexual and reproductive services. This led them to delay seeking ANC. It was further stated that some of the clinics that they visited were in unsuitable buildings which lacked privacy, the rooms were small and overcrowded making it impossible to protect confidentiality.

Privacy is a key requirement for women seeking ANC services. Lack of privacy during physical examinations and counselling processes brings a sense of shame and discomfort to women and leads to poor adherence or dissatisfaction with the services. Hence these women prefer to consult private doctors; owing to the financial constraints it becomes difficult for them and they delay the initiation of ANC at health facilities.

“When we go inside the consulting room they tell us to undress and they start pressing your tummy but they don’t have a machine to check the baby (frowning) eish they tell us to be naked and I don’t think that it’s supposed to be done...I don’t like it because when you go to the doctor they don’t tell you to be naked and there is no privacy here because we go inside the room being two or three women at the same time and they do it every time we come here” (Participant 1).

Women rate the quality of care provided to them according to how they are treated during their visits. Improving the quality of ANC services should be the leading priority in Mbombela health-care facilities. Improving ANC services is most likely to contribute to the increase in women seeking ANC earlier in pregnancy.

Owing to the poor service provided to pregnant women during their visits, the reputation of the health system gets compromised. In a study conducted in Tanzania it was found that poor birth experiences undermined the reputation of the health system, lowered community expectations of the efficacy of delivering in a health-care institution and contributed to the high number of home deliveries. Women who had experienced poor quality services had a low trust in health facilities and were pressurised to deliver at home (Mselle, Moland, Mvungi, Evjen-Olsen & Kohi, 2013).

4.3.3.2 Attitudes of pregnant women related to attendance of ANC services

In this study it was revealed that the pregnant women had unfavourable attitude towards ANC services since they did not like attending ANC or visiting the health facilities repeatedly. This led them to feel that ANC was unnecessary since they perceived that pregnancy is a normal physiological process and not some sort of sickness.

“I have not seen anything that ANC has helped me with because you just come here they check on you and give you medication after that you go home, they don’t even

ask you if you are fine or not. I think that we should just stay at home and start attending when we are about to give birth, I don't see the importance of coming here earlier" (Participant 10).

"I come to attend because of the ANC booklet/maternity case record because if I don't come I will not have it and they want it when you come for childbirth" (Participant 1).

"Coming to the clinic it is useless because you just come here and they palpate your abdomen nothing more, at least at the private doctor because they have a sonar machine to check if your baby is fine. We just come here because we don't have money to consult in private facilities. Here it is just a waste of time because they don't see if the baby is having abnormalities, how are they going to identify the abnormalities by palpating my abdomen? We come here because there is medication that we need to take and they also give us injections to help the baby to develop. But it is also useless because you get the medication and you don't even know what is it for, unless you are educated then you can know which is what" (Participant 9).

Women sought ANC mainly to check their HIV status since they believed that they are susceptible to the virus and wanted to prevent transmission to their unborn babies. Some who attend do so to obtain maternity case records because they believe that they won't be helped when they go to the facility to give birth without it.

The knowledge that pregnant women have regarding ANC determines how they think or feel about ANC services. If they have proper knowledge regarding the danger signs or complications that may arise during pregnancy they would develop favourable attitudes towards ANC services and start ANC earlier in pregnancy to avoid complications.

The negative attitudes of pregnant women may result from previous pregnancy experiences. The researcher maintains that it is not likely for women to seek ANC if they perceive danger signs to be harmless or to be of no importance. However, how pregnant women react when they experience danger signs depends on whether they have knowledge of the danger signs and also if they are aware of the risks that are involved if not treated.

This is in line with the findings from a study that was conducted in Tanzania which showed that the lack of maternal health information at health facilities led to the majority of pregnant women having negative attitudes toward the quality of maternal health provided during ANC visits (Mwangakala, 2016).

The researcher argues that if pregnant women were provided with proper health education and were made to understand the importance of ANC their attitude would be favourable towards ANC services. This calls for intensive health education about the benefits of ANC.

The negative attitude towards ANC services may be due to the poor provision of maternal services. A pregnant woman who experiences a bad attitude will share her uncomfortable experience with her peers and community members and that will lead pregnant women to delay seeking ANC (Nhemachema, 2011). Hence the provision of quality maternal services in rural areas is key to increase utilisation because once pregnant women are satisfied with the services they receive the more likely they are to change their attitudes towards health-care services (Srivastava *et al.*, 2015).

4.3.4 Traditional practices

Traditional beliefs and cultural practices that are common to the community may contribute to the variability in the use of health services. Titaley et al (2010) argues that culture is a set of guidelines (explicit and implicit) which individuals inherit as members of a particular society, and which tells them how to view the world, how to experience it emotionally, and how to behave in it in relation to other people, to supernatural forces or gods and to the natural environment. It also provides them with a way of transmitting these guidelines to the next generation by the use of symbols, language, art and rituals.

Care provided to pregnant women by health care workers should consider and allow for cultural variations. Cultural awareness, competency and openness are essential in a care relationship of the pregnant woman, her partner and family. The taboos, rituals and prescriptions surrounding pregnancy and childbirth it is what defines what is acceptable or unacceptable culturally to the woman (Withers, Kharazmi & Lim, 2017).

4.3.4.1 Traditional practices during pregnancy

In the socially and culturally diverse sites that were visited, the pregnant women interviewed believed that they had to consult a traditional healer or their prophets in their church when they found that they were pregnant. They believed this would prevent miscarriages and keep evil spirits away. Some of the women mentioned that since they were Christians they did not practise any traditional practices during pregnancy but in some churches they have practices performed for pregnant women.

“We consult to traditional healers and they throw bones down and they tell you that you have imfelo (mole) and you need to put a rope around your tummy, they knot the rope according to the number of pregnancies that you have had, if it is your fifth pregnancy they put five knots on the rope and I drink imbita (herbal medication) until you deliver the baby because if you stop drinking it you will have a miscarriage and the rope it is removed by the elders at some point when they feel that I am no longer in danger of having a miscarriage” (Participant 1).

“I just use the oil from church, which I smear on my stomach to prevent the baby from dying and I believe that it works” (participant 14).

“If there are things that are troubling me and they cannot help me here at the clinic, I go to church and they pray for me and if you believe everything becomes fine. My pastor is a prophet and he heals people, if you have pains and he prays for you they stop” (Participant 12).

It is believed that if a pregnant woman had a black mole which has developed on her body it would cause her to have a miscarriage and that she should take herbal medication to prevent a miscarriage.

Similar findings resulted from a study conducted in Bohlabelo on pregnant Zulu women. It was revealed that the traditional birth attendants tie medicated strings around the pregnant woman’s waist in order to maintain the pregnancy till term and also prescribed medication to keep evil spirits away (Ngomani & Mulaudzi, 2012).

Some women believed that they had to consult their ancestors first when they discovered that they are pregnant before going to start ANC. This delayed them starting ANC. Hence, there is still a need for the community and pregnant women to

be offered adequate information regarding maternal health and the risks of being attended by unskilled personnel during pregnancy.

“We report to the ancestors before you come to the clinic, we gather at the house and they brew traditional beer and use it to report to the ancestors and ask for protection if it happens that you are bewitched and also that you don’t get a miscarriage and that you deliver in time not with post dates and when the time for delivery comes you must drink imbita (herbs) to help you during labour that it doesn’t become prolonged” (Participant 10).

Prayers to the ancestors are offered to help deal with ancestor-related illnesses or to request protection for the pregnant woman and unborn baby and good fortune during pregnancy and delivery.

4.3.4.2 Traditional medication taken by pregnant women during pregnancy

It is a cultural practice for some pregnant women to consult prophets or herbalists, also known as traditional healers, during pregnancy. It has been revealed that during the consultations pregnant women are given herbal medication made from the roots, leaves or stems of local plants.

“You boil the tail of the monkey and you drink the water when you go for delivery so that the delivery will be fast, and also the green vegetable (inkaka) you boil and drink it and it also helps for the delivery by inducing strong contractions and there is also imbita (herbal medication) and we get all these from the traditional practitioners...when we go there you tell him/her that you are pregnant and they know which kind of herbs to give you and they also make incisions in your body and put muti so that people will not be able to bewitch you and cause you to deliver post term” (Participant 5).

“We use isiwasho, it is water that is prayed for by the leading woman in our church. Nothing is added to the water, they just pray for it and I drink it whenever I am thirsty there is no measurements. The water is to protect me and my baby from evil things that can be casted towards us, I drink it throughout the pregnancy and I take it to the hospital when I go for delivery for safe labour purposes because it has Holy Spirit” (Participant 6).

These traditional medicines taken during pregnancy are believed to serve different purposes, which include treating abdominal cramps, preventing miscarriages, ensuring safe delivery, inducing strong contractions during delivery and to keep the evil spirits away which may harm the foetus (Withers et al, 2017).

There are many formulas of traditional medication taken by women during pregnancy. In a study conducted in Ekurhuleni it was revealed that herbal medication such as imbelekisane are ingested during pregnancy to prepare for sound foetal growth, to prevent oedema and the presence of vernix on the newborn (Ngubeni, 2002). Isinwazi (*rhoicissuscuneifolia*) is a mixture where roots are boiled with parts of a crocodile and the women take a cupful of the mixture daily until delivery in order to quicken the process of labour and herbs are given to the pregnant woman orally to promote post-natal bleeding as retained blood is regarded as impure and will cause sickness to the woman (Ngomane & Mulaudzi, 2012).

In a study conducted in Tanzania it was found that the use of traditional birth attendants was still widely used by pregnant women for pregnancy care and childbirth services. Most of the traditional birth attendants were traditional healers and they were believed to be capable of solving infertility problems and or any other health problems using traditional medicine (Mwangakala, 2016).

During history-taking, health-care professionals should use a trans-cultural approach to avoid undermining the patient's subjective history that includes her perceptions about disease and health. What the patient views as appropriate forms of treatment and what she believes to be the cause of her illness play an important role in a women's health during pregnancy.

Despite the incompetence and unskilled practices of traditional practitioners they need to be included when implementing health campaigns.

4.3.4.3 Influence of traditional practices in management of pregnancy

Traditionally pregnant women are given information about pregnancy, childbirth and postnatal disorders by the older women in their communities, mothers or mothers-in-law and traditional practitioners or prophets in their church. It is evident that this information depends on local knowledge which has been passed on from generation to generation.

The pregnant women mentioned that they take their herbal medication together with the medication provided by health-care workers and this might cause interaction with the prescribed medication or cause side effects since the herbal medication is taken without measurements.

“Yes I take the herbal medication and pills from the clinic at the same time, but I don’t drink the pills every day because they make me to eat a lot. You know imbita is like water, they don’t even boil the herbs they just put them in water and you drink and I really believe it works” (Participant 1).

“I stopped drinking the holy water because it was causing lower abdominal pains and headaches and my in-laws were against it. But my mother is still encouraging me to go there because she says if I had went back I would have delivered by now. When you go there they induce vomiting and they smear the Vaseline around your abdomen and in few weeks you deliver your baby. My sister in-law also delivered when she was eight months because they induced the labour by the prophets in our church” (Participant 16).

It is evident that traditional remedies and medicines are not well-researched and can be harmful to the pregnant woman and unborn baby. When tested within a western research framework, it has been found that herbal medications have oxytocic effects and have the power to induce uterine contractions which may often result in the rupture of the uterus (Withers et al, 2017).

It has been found that these herbs are taken without recommended dosages and are taken throughout pregnancy. They can induce labour, cause a miscarriage or congenital abnormalities (Mercer, 2011).

As the member of the community, a mother and a wife, the pregnant woman is expected to behave according to social norms, beliefs and traditions while on the other hand, for her survival and that of the unborn baby she is required to adhere to skilled maternal health-care requirements during pregnancy, labour and the puerperium. Hence unless there is a common understanding between the skilled health-care providers and community or traditional practitioners the pregnant woman remains in the middle without proper information on how to react during the process of pregnancy, labour and puerperium.

The reason for consulting traditional practitioners and to follow traditional practices may be caused by the knowledge deficit that pregnant women have regarding ANC. It is evident that traditional practitioners don't have expertise or they are not skilled in conducting maternal health-care as most of the procedures used focus on stopping pain rather than on preserving pregnancy until delivery.

The perceptions and misinformation from their communities could be changed if women are equipped with proper maternal information during their ANC visits.

4.4 SUMMARY

In this chapter it was revealed that women commence ANC visits in the second trimester of pregnancy. Women do not perceive ANC to be beneficial and one of the primary reasons for visiting ANC facilities was to know their HIV status. The majority were not knowledgeable about when to start ANC and did not see the importance of starting ANC earlier. The barriers to attending ANC facilities were explored during the interviews. Despite the availability of free maternal health-care services in primary health-care facilities women still consult traditional healers during pregnancy and believe in traditional practices. Participants obtained the same level of ANC services in all the facilities visited.

Pregnant women are not offered adequate or proper maternal health information. This may be due to staff shortages or inadequate conditions of facilities. Despite these challenges the researcher argues that proper health education can be offered to these women according to their needs during the long period of time they spend in facilities before they could be attended to. This can help them to gain the essential knowledge regarding ANC services and to utilise ANC services effectively to reduce maternal mortality. In the following chapter the conclusions and recommendations from the study will be discussed.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter the findings of the study were presented and discussed. Four themes and twelve sub-themes emerged. Objective 1 of the study was to explore the knowledge of pregnant women regarding ANC in Mbombela Municipality. From the analysis of the findings two themes emerged in relation to this objective, namely ANC attendance, and the knowledge pregnant women had about ANC services. The following sub-themes emerged from the knowledge of pregnant women regarding ANC services, namely, health education during ANC services, knowledge of the benefits of attending ANC, knowledge regarding procedures of ANC services and the importance of ANC.

To describe the attitudes of pregnant women to ANC, their attitudes and individual perceptions were explored. From the discussions on the perceived barriers to ANC the attitudes of health-care workers, long waiting times in health facilities, and the lack of privacy and confidentiality in health-care facilities were identified as barriers. Attitudes of pregnant women related to attendance of ANC services were also described.

Objective 2 aimed to explore the influence of traditional practices in relation to the management of pregnancy. In this regard the participants described some of the traditional practices, traditional medication, as well as the influence of traditional practices in management of pregnancy.

In this chapter of the dissertation the conclusions are drawn and recommendations are made to address some of the issues that emerged from the study. The researcher proposes a way forward to improve the knowledge and attitudes of pregnant women towards ANC services in the Mbombela Municipality.

The purpose of the study was to determine the knowledge and attitudes of pregnant women. Six community health-care centres (CHC) with a high number of ANC attendees were chosen and the principle of data saturation was used to determine

the number of participants interviewed in each facility, thus 18 pregnant women were interviewed. During the in-depth individual interviews the pregnant women were able to provide detailed information, express their personal thoughts, describe traditional practices, and explain their attitudes towards ANC services.

5.2 CONCLUSIONS BASED ON THE STUDY

According to the maternity care guidelines provided by the Department of Health, a woman should visit a health-care facility as soon as she realises that she has missed her menstrual period or as soon as she suspects that she is pregnant (NDoH, 2016). From the results of the study presented in Chapter 4, the participants were not sure when the recommended time to start ANC was, what were the procedures of ANC services, benefits and importance which indicates that their knowledge regarding ANC services was limited.

The level of education was found to have a powerful influence on the knowledge of pregnant women regarding ANC. Knowledge not only transforms, but also empowers women and improves their self-esteem (Zhao, Kulane & Gao, 2009). It seems that educated pregnant women are more likely to be aware of their health status and seek health information even though the hectic schedules of their everyday lives may prevent them from obtaining health-care.

It is evident from the above findings that pregnant women have poor knowledge regarding the importance and procedures of ANC services. The pregnant women are aware of the ANC services but do not have knowledge of the recommended time to start ANC or of danger signs during pregnancy. Knowledge and positive attitudes of women regarding ANC have the potential to reduce maternal morbidity and improve the health of new born.

The findings show that pregnant women have a negative attitude towards ANC services; this was proven by their practice of attending ANC services, because the women were found to have initiated ANC late in their pregnancy and did not see the importance of attending ANC services. The pregnant women verbalise to have dislikes regarding ANC services which could have constituted to their negative attitudes.

It is evident that the shortage of health-care providers and poor working conditions caused the health-care workers to work under pressure and this resulted in them providing poor health services to the pregnant women. This results in the poor utilisation of ANC services or might hinder pregnant women from utilising the services, thus causing pregnant women to develop a negative attitude towards the antenatal care services.

The quality of care that women receive during their ANC visits could influence subsequent ANC visits by influencing the women's perceptions of the value of PHC based care and their confidence in health-care providers. Hence counselling of women regarding danger signs in pregnancy might enhance pregnant women's knowledge and better understanding of ANC services.

As a result of the existing barriers; health-care workers' attitudes, long waiting times at facilities and lack of privacy and confidentiality, most women were discouraged from or delayed using ANC services because they feared being mistreated or insulted by health-care workers. This is in line with the results from a study done in Nigeria which revealed that unfriendly attitudes by health-care workers discourages pregnant women from starting ANC earlier and also made them lose faith in modern medical services; therefore, they resorted to consulting traditional practitioners as they believed that they are more available and friendly (Sanda, 2014).

Information regarding the importance of ANC services should be emphasised by health-care workers, because the poor knowledge regarding ANC services can be prevented by proper and continuous education. From the results which were presented in the last chapter, it is clear that pregnant women continue to use traditional practitioners and use herbal medication since it is a traditional practice which has been passed to them by their elders.

The role of traditional practitioners should be acknowledged by health-care providers because there are still women who prefer and trust them and they will continue using them. Health-care professionals have the responsibility to deliver holistic and individual care; therefore, they should take into consideration the cultural differences among pregnant women which will enable them to deliver care according to the patient's cultural point of view.

5.3 CONCLUSIONS BASED ON THE HEALTH BELIEF MODEL

5.3.1 Perceived severity to not attending ANC services

The findings from this study revealed that pregnant women do not consider using ANC early in pregnancy important; however, they believed that there would be serious consequences if they did not attend ANC clinics at all as they believed they could infect their unborn babies if they did not know their HIV status. They also seemed to believe that they would not be helped during childbirth if they did not have a maternity case record.

5.3.2 Perceived susceptibility of not attending ANC services

The participants believed that complications in pregnancy or miscarriages were caused by evil spirits or witchcraft. For this reason, they sought ANC late in their pregnancies. This might be due to the fact that they did not have adequate information regarding danger signs in pregnancy.

Pregnant women may not see the necessity of attending an ANC facility as they may not perceive pregnancy to be a disease but a normal physiological process. At the same time, they perceive themselves to be at risk of contracting diseases or developing complications during pregnancy.

5.3.3 Perceived benefits of ANC services

The majority of the participants did not perceive early attendance at ANC clinics to be beneficial to them, as they would have preferred to attend ANC clinics later in pregnancy and thus avoid many repeated visits. Although they had doubts about the value of seeking ANC, they knew that attending the clinics would benefit them because they would receive HIV testing and counselling.

The researcher is confident that if pregnant women were to believe that receiving ANC early in their pregnancy would promote their health and the health of their unborn babies, they would probably take advantage of the opportunities that provide the potential for positive outcomes for their pregnancies. Even if a pregnant woman were to perceive a health problem to have serious consequences, she would not adopt healthy behaviours unless she believed she could easily access care services. This, in turn, would result in better health conditions for herself and her baby.

5.3.4 Perceived barriers to antenatal care services

Although the pregnant women believed that there are some benefits in receiving ANC services, the participants in the study identified certain barriers that made them delay seeking ANC and affected their decision to actually utilise ANC services. These barriers included a lack of privacy and confidentiality in health-care facilities, health-care workers' attitudes, and long waiting times in health-care facilities. The negative attitudes of the participants was also found to be a barrier in attending ANC clinics.

5.3.5 Pregnant women Self-efficacy to attending ANC services

Despite the fact that women encountered unfavourable circumstances or barriers that prevented them from visiting ANC facilities, they still presented themselves at health-care facilities for ANC services. Even though the participants had little knowledge regarding the procedures and importance of antenatal care, they attended ANC clinics because they were aware of the services on offer.

5.3.6 Cues to action to attend ANC services

While pregnant women did not know when the best time was to start ANC, there were several interventions that could improve their knowledge and also encourage them to start ANC at the recommended time.

Teaching women about problems, preventive measures, causes and treatments can improve their knowledge and help them make better health decisions. As mentioned before, the health-care seeking behaviour of pregnant women is influenced by the knowledge and attitudes they have regarding ANC services. Hence, if they were to be provided with proper health-care education and information, their behaviour would probably change, despite the challenges and existing barriers.

The cues include the factors that will motivate pregnant women to start ANC early and to continue using these services throughout their pregnancies. These women will probably be motivated by the health information they receive either from health-care professionals during their ANC visits, leaflets or brochures provided to them, radio and television broadcasts, and the Internet.

5.4 RECOMMENDATIONS

Based on the findings from this study, the following recommendations are made which may help in the improvement of the knowledge and attitudes of pregnant women regarding ANC:

Materials such as pamphlets or brochures and other forms of media (television, radio) should be made available to pregnant women to enhance their knowledge and raise awareness about the importance of ANC services.

Health-care workers must ensure the privacy of pregnant women during procedures and must maintain confidentiality concerning their health information. As bridge of privacy in facilities caused women to have negative attitudes towards the ANC services.

Programmes must be developed to directly improve the knowledge of pregnant women and communities by addressing the challenges that women encounter when they access ANC services.

Health education regarding ANC services must be given to women every day in the waiting areas of health-care facilities. The health-care workers should promote the active participation of pregnant women during the health education sessions and provide opportunities to ask questions so that they can identify the level of the women's knowledge.

Health-care policy makers should also focus on meeting the health information needs of women and enable them to become well-informed and knowledgeable to make informed maternal health decisions.

Workshops and training should be conducted for health-care workers to improve those observed weaknesses which were barriers to the utilisation of ANC services.

Traditional practitioners should be involved in maternal health-care programmes so that they can be equipped with information to improve their skills needed for maternal care.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

A similar study should be conducted after some years to determine whether there has been any improvement in the knowledge and attitudes of pregnant women.

Research to explore ways to improve knowledge of and attitudes to ANC services should be conducted.

The study could be duplicated in other municipalities and districts because the findings of the study can be generalised.

5.6 LIMITATIONS OF THE STUDY

Owing to the specific context of this study, the results cannot be generalised to the entire country, province or district, but only for the Mbombela Municipality.

It was difficult to gather the information regarding traditional practices as it is considered to be personal or taboo; participants might have withheld some information.

During data collection, information was not gathered from the pregnant women who are not attending ANC. Only the knowledge and attitudes of the pregnant women who attend ANC were presented, these sources they may have different knowledge and attitudes regarding ANC services.

The researcher provides ANC services in one of the selected PHC facilities, this might have caused the participants to withhold some information during the interviews.

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ANNEXURE A: LETTER TO THE CLINIC MANAGERS

From: Lucia Drigo

19 Bell Street Nelspruit

1200

To: PHC managers in Mbombela Municipality

Dear Sir /Madam

Research project on knowledge and attitudes of pregnant women towards ANC services in Mbombela.

I Lucia Drigo student number 11605939 registered with university of Venda for master in nursing, hereby requesting your permission to conduct a study at your clinic during April-May 2017. The topic of the research is knowledge and attitudes of pregnant women towards ANC in Mbombela Municipality, Mpumalanga, South Africa.

The data will be collected between April and May 2017, in-depth individual interviews which will take about 45-60 minutes will be conducted before or after the women have been attended to by the midwives. To maintain privacy and confidentiality the researcher would request a private room to conduct the interviews.

Participants will be pregnant women attending ANC at your facility, consent form will be provided for the pregnant women to sign before participating in the study.

Your consideration in the above matter will be highly appreciated.

Yours sincerely

Drigo L.

ANNEXURE B: LETTER TO THE DEPARTMENT OF HEALTH

19 Bell Street Nelspruit

1200

To: Mpumalanga Department of Health

Dear Sir/ Madam

Application for clearance to conduct a research study

I Lucia Drigo student number 11605939 registered with University of Venda for master of curriculum degree programme. I would like to conduct a research in Mbombela Municipality, Mpumalanga, The topic of the research is: knowledge and attitudes of pregnant women towards ANC services in Mbombela Municipality of Mpumalanga province, South Africa. Six primary health care facilities will be selected to conduct the study.

I am hereby requesting your permission to conduct the study, which will be conducted between April and May 2017 in the PHC facilities namely: Nelspruit CHC, Bhuga, Kanyamazane, Msogwaba, Matsulu and Kabokweni CHC.

An informed consent form will be provided for those who wish to participate in the study, the facilities will be requested to provide a private room where the interviews will be conducted to ensure privacy and confidentiality. To maintain anonymity of participants, no identification will be linked to the participants. This study will not risk the health of the patients.

Any queries regarding the study can be forwarded to luciadrigo@gmail.com (0715653600) or my supervisor Rachel.Lebese@univen.ac.za.

Your consideration in the above matter will be highly appreciated.

Yours sincerely

Drigo L.I

ANNEXURE C: INFORMED CONSENT FORM

TOPIC: knowledge and attitudes of pregnant women towards antenatal care (ANC) services in Mbombela Municipality of Mpumalanga Province, South Africa.

Informed consent form for pregnant women attending ANC at the selected PHC facilities.

SECTION A: INFORMATION SHEET

Dear participant

I Lucia Drigo with student no: 11605939 registered with the university of Venda for a masters in nursing. The purpose of this letter is to request your permission to participate in the study that will be conducted in your clinic. Permission to conduct the study was given by the department of health in Ehlanzeni district and the study was also approved by university of Venda ethical committee.

The purpose of this study is to explore and describe the knowledge and attitudes of community members.

Findings from this study might help determine whether pregnant women are knowledgeable about the importance of ANC and will help to identify the attitudes of pregnant women and how issues of knowledge and attitude influence the utilization of ANC.

Participants must understand that:

Participants are not forced to participate in this study, participation in this study is voluntary.

You may decide at any time during the study to withdraw even after signing the consent form.

This study isn't part of the routine ANC service that you receive at your clinic.

No remuneration will be paid for participating in the study.

In-depth individual interviews will be conducted, and the researcher will ask questions regarding your knowledge and attitude towards ANC services. A tape

recorder will be used to record the discussion and the information obtained will be confidential as only the researcher and supervisor will have access to the cassettes.

After all the interviews have been done, all the information gathered will be put together and analysed. The findings from this study will be disseminated.

After reading and understanding the information above you can ask any questions related to the study and sign the consent form if you accept and feel comfortable to participate in the research.

SECTION: B

I have read and understood the purpose and objectives of the research. I understand that my participation is voluntary and I will not be payed to participate in the study.

I know that I can withdraw from the study at any time if I wish to do so. I fully understand that my identity will be kept anonymous though the results from the study may be published.

I have been given a chance to ask questions and all my questions were answered to my satisfaction before participating in the study.

Ihereby agree to participate in the study mentioned above.

Signature.....

Date.....

Place.....

witness.....

ANNEXURE D: ISIVUMELWANO

Luphenyo: lwati nesimo-sengcondvo sekubuka tintfo kwebafati labatitfwele ngekusetjentiswa kwemfolamphilo webafati labatitfwele base Mbombela Municipality, eMpumalanga, eMzansi Africa.

Lesi sivumelwano sebafati labatitfwele bemganga waseMbombela.

Lesisi vumelwano sifaka ekhatsi liphephe leminingwane nenjongo yaleluphenyo kanye nesitifiketi sesivumelwano lokusayinwa kuso uma uvuma kuhlanganyela kulelipheno.

Mininingwane yeluphenyo

Ligama lami ngingu Lucia Drigo, ngenta tifundvo tami ku masters of nursing enyuvesi yase Venda, inombolo yami yasenyuvesi itsi 11605939. Inhloso yaleliphepha kutsi ngitfole ligunya kuwe kutsi ube lilunga lwaleluphenyo. Leluphenyo livunyelwe litiko letemphilo lase Mpumalanga kanye ne ngcungcutsela lebukene nemalungelo okuchutjwa kwemapheno enyuvesi yaseVenda.

Injongo yaleluphenyo kwati lwati nesimo sengcondvo sekubuka kwetintfo kwebafati labatitfwele ngekusetjentiswa kwemfolamphilo webafatila batitfwele base Mbombela. Imiphumela yaloluphenyo ingasita ekwatini kutsi bahlali base Mbombela banalo lwati ngekusetjentiswa kwemfolamphilo webafati labatitfwele.

Malunga aloluphenyo kumele bavisise kutsi:

Abakaphoceleleki kubandzakanyeka kuloluphenyo, uhlanganyela kuloluphenyongo kutsandza kwakho.

Unelilungelo lokuyekela kulelipheno noma ngasiphi sikhatsi lofuna ngaso noma ngabe sewusayinile sivumelwano.

Akukho lowutawukhokhelwa kona ngekutibandzakanya kulelipheno.

Intfo lengitoyenta kutsi ngibute umbuto mayelana naloluphenyo, ngitosebentisa lirekhodi kutfole yonkhe leminingwane ekuoceni kwetfu. Yonkhe mininingwane itogcinwa iyimfihlo phakatsi kwami kanye nemphatsi wami wasenyuvesi. Ligama lakho angeke livele kulolucwaningo noma seliyakuyoshicilelwa.

Ngemuva kwekufundza lemininingwane lengenhla uvumelekile kutsi ungabuta noma ngumuphi umbuto mayelana naleluphenyo.

INCENYE YESIBILI YESIVUMELWANO

Ngifundzile futsi ngavisisa migomo nekutsi iyini inhloso yaloluphenyo. Ngiyavisisa kutsi kutibandzakanya kwami kuleluphenyo kuyindzandvo yami angikaphocelelwa.

Ngiyati kutsi ngingayekela kuloluphenyo noma ngabe ngusiphi sikhatsi uma ngifuna. Ngiyavisisa kutsi ligama lami angeke livele ndzawo kulelipheno nekutsi kute lengitokutfolela ekutibandzakanyeni kwami kulelipheno.

Nginikiwe litfuba lekubuta mibuto ngephambi kwekutsi ngihlanganyele kulelipheno.

Mine..... ngiyavuma kuhlanganyela kulelipheno.

Umsayino..... lilanga.....

Indzawo..... umvumelani.....

ANNEXURE E: ETHICAL CLEARANCE FROM THE UNIVERSITY OF VENDA

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:

Ms L Drigo

Student No:

11605939

PROJECT TITLE: Knowledge and attitudes of pregnant women towards antenatal care services in Mbombela Municipality, Mpumalanga Province, South Africa.

PROJECT NO: SHS/16/PDC/37/0802

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof RT Lelese	University of Venda	Supervisor
Dr NJ Ramakuela	University of Venda	Co- Supervisor
Ms L Drigo	University of Venda	Investigator – Student

ISSUED BY:

UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE

Date Considered: February 2017

Decision by Ethical Clearance Committee Granted

Signature of Chairperson of the Committee: 


Name of the Chairperson of the Committee: Prof. G.E. Ekosse




University of Venda

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TELEPHONE (015) 962 8504/8313 FAX (015) 962 9060
"A quality driven, financially sustainable, rural-based Comprehensive University"

ANNEXURE F: AUTHORISATION FROM MPUMALANGA DEPARTMENT OF HEALTH TO CONDUCT THE STUDY



health
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA



MPUMALANGA
DEPARTMENT OF HEALTH

No. 3, Government Buildings, Riverside Park, Ext. 2, Mbombela, 1200, Mpumalanga Province
Private Bag 411285, Mbombela, 1200, Mpumalanga Province
Toll: +27 (12) 786 3429, Fax: +27 (12) 786 3428

Ukhaya Lembaliyo Department van Gesondheid Ukhayanga Mincophakhe

Letter of Support Signed by Chief Director (CD)/CEO/District Manager (DM)/Programme Manager (PM)

1. Name & contact no. of Applicant		Luca Drigo - 071 56 53 600	
2. Title of Study:		antenatal care services	
3. Aim and population target:		Explore and describe the knowledge and attitudes of pregnant women towards ANC services and population target - pregnant women attending ANC in Mbombela	
4. Period to undertake the Study		From: 01/04/2017 to: 31/05/2017	
5. Availability of Required Support			
5.1: Facility Staff Required to assist with the Study	Yes	How many:	NO
		Nurses:	
		Doctors:	
		Other, please specify:	
5.2: Patient Records/Files	Yes		NO
5.3: Interviewing Patients/ participants at Facilities	Yes		NO
5.4: Interviewing Patients/ participants at Home	Yes		NO
5.5: Resource Flow (Are there benefits to Patients/community)	Yes	Please list:	NO
5.6: Resource Flow (Are there benefits to Faculty/District)	Yes	Please list: Improvement of ANC services	NO
6. Availability of Required Clearance			
6.1: Ethical Clearance	Yes	Clearance Number: SHS/15/PAC/32/1602	Pending
6.2: Clinical Trial	Yes	Clearance Number:	Pending
6.3: Vaccine Trial	Yes	Clearance Number:	Pending
6.4: Budget	Yes	Source of fund: University of Venda	NO

Declaration by Applicant:
I Mr/MS/Ms/Prof/Adv. Luca I. Drigo agree to submit/represent the result of this study back to the CEO/Institution/District.

Comment by CEO/DM/PM: *Results of the study should be made available to the Dept.*

Signature of CEO/DM/PM: *[Signature]* Date: 04/04/2017

Name: *[Name]* Stamp/Date: *[Stamp]*

Please email completed form to: jerry@mtmhealth.gov.za or Thembu@mtmhealth.gov.za

Please note that this letter is not an approval to undertake a study, but a support letter from above said facility/ district. If the CEO/ District Manager acknowledges or have been consulted on the study.

ANNEXURE G: DECLARATION FROM EDITOR

Jean Mitchell Consulting	
JE Mitchell (PhD) Editing, Academic Writing & Materials Development jeanmitch@intekom.co.za	
Address: 42 Berg Street Montagu 6720 Western Cape	Tel: 0236142436 Cell: 0822022389

1 May 2018

DECLARATION

To whom it may concern

This is to declare that I have edited the Master's dissertation of Ms L. I. Drigo, entitled *Knowledge and attitudes of pregnant women towards antenatal care services in Mbombela Municipality, Mpumalanga Province, South Africa*

To my knowledge the manuscript is free of language errors.

Yours faithfully



Dr J. E. Mitchell

