FACTORS CONTRIBUTING TO LATE ANTENATAL CARE BOOKING AT THULAMAHASHE LOCAL AREA AT BUSHBUCKRIDGE SUB-DISTRICT IN MPUMALANGA PROVINCE

by

MKATEKO MARIA MKHARI

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in the subject

HEALTH STUDIES

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR JM MATHIBE-NEKE

NOVEMBER 2016
DECLARATION

I declare that FACTORS CONTRIBUTING TO LATE ANTENATAL CARE BOOKING AT THULAMAHASHE LOCAL AREA AT BUSHBUCKRIDGE SUBDISTRICT IN MPUMALANGA PROVINCE is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

30 November 2016

SIGNATURE

DATE

MKATEKO MARIA MKHARI
Delayed access to antenatal care (ANC) has been linked to maternal and foetal mortality and morbidity. Early and regular attendance of antenatal care by pregnant women is very important as it could identify birthing complications and includes amongst others, measuring of blood pressure to exclude pregnancy induced hypertension and measuring of weight to exclude intrauterine growth restriction.

The purpose of the study was to explore the factors contributing to late antenatal booking around Thulamahashe local area so that interventions can be done to ensure that all pregnant women start antenatal care as soon as they miss a period, at twelve weeks at the most or before 20 weeks of gestation. The study was conducted at Thulamahashe local area which consists of 4 eight hour clinics and 1 twenty-four hours community health centre, at Bushbuckridge sub district, Ehlanzeni district, Mpumalanga province in South Africa.

Data was collected using a researcher designed questionnaire which is a list of questions which were asked from respondents and which gave indirect measures of the variables under investigation. The structured questionnaire consisted of both open and close ended questions, which were used to collect information directly from pregnant women.

The population of the study was pregnant women who had started antenatal care after 20 weeks of gestation, who were 18 years and above. The sample size consisted of 25 pregnant women who had booked late for antenatal care who were drawn from each facility by simple random sampling method and the total sample size was 127 respondents.
The results indicated that most women initiated ANC later than the recommendations by World Health Organization (WHO) which is less than twelve weeks of gestation. Factors that were identified as associated with late antenatal booking were midwives’ attitude distance to the clinic, poor infrastructure, unplanned pregnancy, lack of education and unemployment.

**Key concepts**

Factors contributing; late antenatal booking; Thulamahashe local area.
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- To my sisters, Glory Mabunda, Getty Ngobeni, Rachel Nxumalo and Grace Nxumalo, for their encouragement and support.
Dedication

I dedicate this study to my late husband, Kenneth Rodgers Mkhari. To my children, Makungu, Malwandla, Khanyisa, and my niece, Kulani Maluleke, for their unconditional love, support and encouragement without whom this would not have been possible. Above all, to God who enabled me with the courage, wisdom and knowledge to complete this study.
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<td>MDG</td>
<td>Millenium Development Goals</td>
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<td>MCWH</td>
<td>Maternal, Child and Women’s Health</td>
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<td>MMR</td>
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CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Chapter 1 introduces the research focus, gives a background of the research problem and describes the statement, aims, objectives, definitions of key concepts, research methodology, validity and reliability, ethical considerations, significance, scope and limitations of the study.

1.2 BACKGROUND

Early and regular attendance of antenatal care by pregnant women is important to determine the existing health status of the mother and the foetus as well as early detection of indicators of possible birthing complications (WHO 2012:1). During antenatal care booking assessment and tests are conducted on pregnant women which includes, the measuring of blood pressure to exclude pregnancy induced hypertension; urine testing to exclude proteinuria and weight monitoring to establish intrauterine growth restriction (DOH 2015:35). The pregnant woman is also tested for HIV and if she tests positive antiretroviral therapy (ART) is initiated for eradication of mother-to-child transmission (National DOH 2015:8). A study conducted by Solarin and Black (2013:359) in the inner Johannesburg on women’s antenatal care booking experience revealed that antenatal care is the ideal time to provide the woman with appropriate health education concerning diet, rest, exercise and breastfeeding and it was also revealed that pregnant women in Johannesburg were turned away from the clinics as they were considered too early for antenatal care booking and most of them returned for booking in the third trimester.

A study conducted in the United Kingdom by Haddril, Jones, Mitchell and Anumba (2014:5) on understanding delayed access to antenatal care led to the findings that there was an increase in maternal, foetal, infant mortality and morbidity and the reasons stated were poor reproductive health knowledge and delay in diagnosis of pregnancy. In the study conducted by Finlayson and Downe (2013:1) on why do women not use antenatal care services in Low and Middle income countries, concluded that the rate of maternal
mortality appeared to be increasing in many low and middle income countries especially the sub-Saharan Africa and the rates decline did not meet the Millennium Development Goals. Millennium Development Goal 5 was aimed at reducing maternal mortality by 75% by 2015 in conjunction with the WHO Sustainable Development Goal 3 which aims to ensure healthy lives and promote well-being for all at all ages by 2030. The findings of the study conducted by Onoh, Umeora, Agwu, Ezengwui, Ezenou and Onyebuchi (2012:173) on patterns and determinants of antenatal booking in Southeast Nigeria at Abakiliki revealed that the reasons given by women who booked late for antenatal care were lack of transport to health facilities, poor staff attitude, distance to the clinics and cultural beliefs, the majority of women booked late because they viewed antenatal care as curative than preventive. Another study conducted in Uganda by Kisuule, Kaye, Najjuka, Ssematimba, Arinda, Nakitende and Otim (2013:121) on timing and reasons for coming late for the first antenatal care visit by pregnant women in Mulago hospital revealed that women started antenatal care at 29 weeks of gestation as they did not have problems with their pregnancies so they didn’t see any reason to book early. A study conducted in Khayelitsha by De Vaal (2011:11) on the reasons for late antenatal care at Michael Mapongwana clinic revealed that the mean gestational age of booking was 26 weeks which was late and the reasons were perceived as poor quality of care. Mpumalanga is also facing similar problems as it consists of mainly rural areas.

The study conducted by Ngomane and Mulaudzi (2012:30-38) on indigenous beliefs and practices that influence the delayed attendance of antenatal clinic by women at Bohlabela subdistrict led to the findings that women booked late due to cultural beliefs that pregnancy need to be preserved with herbs, they will go to clinics late in pregnancy to put their names on registers in case they have difficulties in their pregnancies. The Saving Mothers (2008-2010) report has identified that Mpumalanga Province had 66, 7% of maternal deaths which could have been prevented if women initiated antenatal care within the 12 weeks of gestation.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Polit and Beck (2012:82) refers to the problem statement as an expression of the dilemma or troubling situations that need investigation and that provides a rationale for a new enquiry. Research problem is an area of concern in which there is a gap in the knowledge needed for nursing practice (Burns & Grove 2015:132). Late antenatal care booking in
the Thulamahashe local area has seen rise in maternal and foetal mortality in the local community health according to District Health Information System (DHIS 2014) and the nearby hospitals. During perinatal reviews which are conducted monthly, the file audits which have been done at Mapulaneng hospital indicates that 80% of the cases could have been prevented if pregnant women had started antenatal care earlier. The Department of Health (DoH) (2014) Annual Report 2013/14 stated that despite the department’s strong belief that ‘no woman should die giving birth’, conditions such as hypertension in pregnancy, antenatal and postnatal haemorrhage continued to be the major cause of death in pregnancy and childbirth among South African women, HIV/AIDS also account to 49% of maternal mortality. These conditions could be addressed if women books early for antenatal care. The planned national target for antenatal care before 20 weeks was 60% and only 50% was achieved whereas Mpumalanga province achieved 49.1%. According to Ehlanzeni District Health Information System (01 April 2013-31 March 2014) Bushbuckridge sub-district was at 70%. Thulamahashe local area from July to September 2013 was at 62%.

1.4 RESEARCH AIM/PURPOSE

The aim of the study was to explore the factors contributing to the late antenatal care booking around Thulamahashe local area so that measures can be put in place to ensure that all women start antenatal care as soon as they miss a period or within 12 weeks of gestation.

1.5 RESEARCH OBJECTIVES

According to Polit and Beck (2012:73), research objectives are specific accomplishments the researcher hopes to achieve by conducting a study, including obtaining answers to research questions or testing research hypothesis but may also encompass broader aims. The study objectives were to

- explore factors contributing to late antenatal booking by women at Thulamahashe local area
- use findings to develop strategies and recommendations that will assist and improve early antenatal care booking.
1.6 RESEARCH QUESTIONS/HYPOTHESES

- What are the factors that contribute to late antenatal booking at Thulamahashe local area?
- What strategies can be used to encourage early antenatal booking at Thulamahashe local area?

1.7 DEFINITIONS OF KEY CONCEPTS

**Late antenatal care booking** is when pregnant women make first appearance at an antenatal clinic after 20 weeks of gestation (Sellers 2013:179).

**Antenatal care** refers to the care given to pregnant women from the time conception is confirmed until the beginning of labour (Fraser, Cooper & Nolte 2014:231).

**Factors’ contributing** refers to one of the several aspects that influence or cause a situation (Longman Dictionary of Contemporary English 2012:491).

1.8 OPERATIONAL DEFINITIONS

**Late antenatal care** is when a pregnant woman start care at 20 weeks of gestation or more.

**Antenatal care** is the care provided to the pregnant woman at the clinic or hospital from the time of conception to the onset of labour.

1.9 RESEARCH DESIGN AND METHOD

A quantitative study paradigm was used, this is a formal, objective, rigorous, systematic process for generating numerical information about the world and is applied to describe new situations and to determine the effectiveness of treatments on selected health outcomes in the world (Burns & Grove 2015:32). Information on factors contributing to late antenatal care booking was explored so that interventions can be formulated. This study examines data at one point in time; data was collected on one occasion only with different respondents (Brink, Van der Walt & Van Rensburg 2012:115). A descriptive cross-sectional study was applied to determine factors contributing to late antenatal care
by collecting data from women who started antenatal care after 20 weeks of gestation. Cross-sectional studies are appropriate for describing relationships amongst phenomena at a fixed point in time. It involves examining a group of subjects simultaneously in various stages of development, level of education or stages of recovery to describe changes in a phenomenon across stages (Burns & Grove 2015:212). Cross-sectional studies are economical and there are often alternative explanations for the findings (Polit & Beck 2012:186).

1.10 SETTING AND POPULATION OF THE STUDY

According to Brink et al (2012:206), the term population refers a complete set of persons or objects that possess some common characteristics that are of interest to the researcher. In this study the population were pregnant women who started antenatal care after 20 weeks of gestation who were also 18 years of age and older. The study was conducted at Thulamahashe local area at Bushbuckridge sub-district, Ehlanzeni district in Mpumalanga province. The local area consists of 4 eight hour clinics which operate 7 days per week with no call system and 1 community health centre which operates for 24 hours 7 days per week which is called early booking. These facilities were selected because of low uptake of antenatal services before 20 weeks of gestation.

![Figure 1.1 Map of Bushbuckridge Local Municipality](image)

(Bushbuckridge Local Municipality. Local Economic Development Strategy 2010-2014:15)

1.11 SAMPLE AND SAMPLING METHODS

Sampling is a process of selecting participants for inclusion in the study who are representative of the population being studied (Burns & Grove 2015:249).
1.11.1 Sampling approach

Probability sampling, as stated by Brink et al (2012:126) was used as all elements had an equal chance of being included in the sample and also increases sample representativeness of the target population. Pregnant women were selected by simple random sampling. The list of pregnant women who booked antenatal care after 20 weeks of gestation was entered into a spreadsheet of the computer. The elements were assigned a random number and also sorted by their random numbers, and the computer then randomly selects subjects until the desired sample was achieved.

1.11.2 Sample size

The sample size was calculated by proportion formula considering the prevalence of late antenatal booking and 95% confidence interval at Thulamahashe local area (Polit & Beck 2012:407) according to District Health Information System ((DHIS) between 10 April 2013 and 31 March 2014 there were 189 pregnant women who started antenatal care after 20 weeks of pregnancy, the total population was 127 which was shared among all Thulamahashe local area facilities 25 was drawn from the four clinics and 27 from the community health centre.

1.12 DATA COLLECTION

Data was collected using a researcher-designed questionnaire (Annexures D and G) which is a list of questions which was answered by respondents and which gave indirect measures of the variable under investigation. The questionnaire consisted of both close and open ended questions and was used to collect information directly from the respondents. The questionnaire was divided into three sections, Section A consisted of demographic information, Section B consisted of reasons for late antenatal booking and Section C consisted of perceptions on antenatal clinic.
1.12.1 Validity of instruments

Polit and Beck (2012:745) define validity as a quality criterion referring to the degree to which inferences made in the study are accurate and well founded.

1.12.2 Content validity

Content validity examines the extent to which measurement method or scale includes all major elements or items relevant to the construct being measured (Burns & Grove 2015:291). The questionnaire was validated by involving experts in Maternal and Child Health such as experienced midwives, advanced midwives and the Mother, Child and Women’s Health (MCWH) coordinators who gave inputs before the tool was used. It was also reviewed by the University of South Africa (UNISA) Health Studies Higher Degrees Committee and Thulamahashe local area supervisor and their feedback was used to make alterations to some of the questions before piloting.

1.12.3 Face validity

Face validity refers to whether instruments looks like measuring the target construct (Polit & Beck 2012:336). Face validity was ensured through consultation with experienced midwives, advanced midwives and MCWH coordinators.

1.12.4 Reliability of instruments

Reliability is the degree and consistency or dependability with which an instrument measures an attribute (Polit & Beck 2012:741). The instrument can be said to be reliable if it measures accurately and reflect true scores of attributes under investigation. The test-retest reliability was used by administering the same questionnaire to a group of pregnant women in order to evaluate the test for stability over time and the obtained correlation coefficient indicated the stability of the scores.

1.12.5 Pilot study

Polit and Beck (2012:195) refer to pilot study as a small-scale version or trial run designed to test methods to be used in a larger, more rigorous study. A pilot study of the
questionnaire was conducted, 10 questionnaires were administered at clinics not selected for the study but in Bushbuckridge sub-district. The most efficient way to find out how good a questionnaire was, was to pilot it with a group of respondents who had the same characteristics as those involved in the study which were pregnant women who started antenatal care after 20 weeks of gestation.

1.13 DATA MANAGEMENT AND ANALYSIS

Data analysis entails categorizing, ordering, manipulating and summarizing and describing data into meaningful terms (Brink et al 2012:177). Descriptive statistics allow the researcher to organize data in ways that give meaning and facilitate insight into the research and also to establish patterns of relationships. The researcher used descriptive statistics to provide answers to research questions. It is however important to understand that the analysis of research data does not provide answers to the research questions, the interpretation of results was necessary to find answers.

1.14 ETHICAL CONSIDERATIONS RELATED TO DATA COLLECTION

Polit and Beck (2012:272) define ethics as 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, the institution where research is conducted and the research itself. Ethical clearance was obtained from University of South Africa Health Studies Higher Degree Committee. The study was conducted after authorization by the Research and Ethics committee in Mpumalanga province, Bushbuckridge sub-district manager and the supervisor of Thulamahashe local area. The following ethical principles guided the researcher:

Respect for human dignity

Polit and Beck (2012:154) describe respect for human dignity as the right to full disclosure. The respondents have a right to decide voluntarily whether to participate in a study or not without any penalty. The respondents signed an informed consent form (Annexures A and E) which had clear information regarding participation in the study which also ensured that respondents were not forced to take part. They had rights to ask questions, refuse to give information or withdraw from the study at any point. The cultural
beliefs of the respondents were respected. The researcher ensured that no name, address and the file numbers of the respondents were used in the study to ensure confidentiality.

**Justice**

Polit and Beck (2012:155) describe justice as the respondent’s right to fair treatment and right to privacy. The respondents were selected for the reasons related to the study problem and were not selected according to class or race. The respondents had right to confidentiality and the confidentiality binding form (Annexure F) was signed as a pledge that any information they provided will not be reported in a manner that identifies them. The researcher treated respondents who declined to participate or wished to withdraw from the study in a non-prejudicial manner. The researcher kept the collected information anonymous by keeping it in a safe place that was known only by the researcher and any information linked to the respondents was kept confidential. No data was gathered by the researcher without the respondent’s knowledge such as using hidden cameras or microphones. The institution kept data in strict confidentiality by ensuring that no unauthorized person gain access to data.

**Beneficence**

According to Brink et al (2012:35), beneficence states that the researcher need to secure the well-being of the respondents who had a right to protection from physical, psychological, emotional, spiritual, economic, social, legal, discomfort and harm. The respondents were protected from exploitation; they were assured that their participation or information will not be used against them. The research was conducted under the supervision of an experienced researcher. The researcher did not ask questions that needed respondents to reveal sensitive information which may cause discomfort to them.

**1.15 SIGNIFICANCE OF THE STUDY**

The significance of the study was to identify problems which pregnant women had concerning health services and the factors that contributed to late booking so that strategies that will assist in improving maternal health can be developed. The information will assist in making plan to improve health care practices if they are lacking to prevent
late antenatal booking. The results of the study will also assist the Mpumalanga Department of Health in developing and revising maternal policies and guidelines on antenatal care. The outcomes if applied could also assist in the WHO 17 sustainable-development goals especially goal number 3 which is about ensuring healthy lives and promote well-being at all ages.

1.16 SCOPE AND LIMITATIONS

The study was conducted in 5 targeted facilities of Thulamahashe local area at Bushbuckridge sub-district in Mpumalanga province. Those who started antenatal care before 20 weeks were excluded from the study. There are few studies on late antenatal booking done at Thulamahashe local area and this will make it difficult to make adequate comparison with other local researchers and to find out differences in findings. Some clinics were still using clinic day’s e.g. first antenatal booking scheduled for Mondays only which will make it difficult to conduct the study.

1.17 OUTLINE OF THE STUDY

This report consists of five chapters as explained below:

In Chapter 1, the researcher introduced the research topic, gave a background of the research problem and described statement, aims, objectives, definitions of key terms, research methodology, validity and reliability of the study, ethical consideration and significance the study.

Chapter 2: Literature review. This chapter gives an in-depth review of the literature related to the topic under study.

Chapter 3: Research design and methodology: This chapter outlines the research methodology focusing on the research design, population, sampling, data collection, data analysis procedures and ethical considerations for this research were explained.

Chapter 4: Data presentation, analysis and interpretation: This chapter presents the results of the study, interprets them according to the set objectives of the study and discusses them in relation to findings from other researchers.
Chapter 5: Conclusions and recommendations: This chapter reports the conclusions of the study in relation to the set objectives, outlines limitations and makes recommendations based on the findings of the research.

1.18 CONCLUSION

This chapter has set a stage for the study. It gave background on the factors contributing to late antenatal care and the importance of early antenatal care and that ANC services should be easily accessible so that pregnant women can be able to get services early to meet recommendations from maternal guidelines in South Africa. The aim and objectives of the study were outlined and the significance of the study was discussed, key concepts that were used in the study were defined.
CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Literature is written sources relevant to the focus of the study including articles published in periodicals or journals, internet publication, conferences papers, thesis, dissertations, clinical journal, textbooks and other books (Burns & Grove 2015:165). Literature review is a critical summary of research on a topic of interest, often prepared to put research problem in context (Polit & Beck 2012:732). Literature review provides the background for the problem studied, describe current knowledge of a practice problem, and identify gaps in this knowledge base and explaining how the study being reported contributed to building knowledge in this area (Burns & Grove 2015:163).

This chapter gives an outline of the literature reviewed for the purpose of deriving the propositions against which the study was undertaken and also provides a contextual background to the topic under discussion. The conceptual framework of this study is the Health Belief Model (HBM) which begins this chapter followed by the sections that provides factors contributing to late antenatal booking as it relates to the HBM assumptions and constructs at Thulamahashe local area. The main purpose of this chapter is to enhance the understanding of the results in similar studies.

2.2.1 Antenatal care in South Africa

Antenatal care is the care given to pregnant women from the time of conception until the beginning of labour (Fraser et al 2014:231). Maternal guidelines were developed in South Africa in 2015 by the sub directorate maternal health to guide doctors and midwives who provides obstetric, surgical and anaesthetic services for pregnant women who attend the district clinics, health centres and hospitals where access to specialist services is limited (DOH 2015:16). In the guidelines antenatal care (ANC) was identified as one of the ‘pillars’ of safe motherhood together with the choice of contraception, basic antenatal care, clean and safe delivery, essential obstetric care and choice on termination of
pregnancy. These pillars of safe motherhood were based on the WHO’s safe motherhood initiative (DOH 2015:14).

The provision of ANC services brings with it a positive impact on pregnancy as it enables the identification of risk factors and early diagnosis of pregnancy complications and appropriate management and health care management (DOH 2015:20). The positive impact can be achieved by:

- Screening of pregnancy problems
- Assessment of pregnancy risk
- Treatment of problems that may arise during antenatal period
- Giving medication that may improve pregnancy outcome
- Provision of information to pregnant women
- Physical and psychological preparation for childbirth and parenthood (DOH 2015:33)

According to Maternal Guidelines (DOH 2015:34) a woman should visit health care provider as soon as she suspects pregnancy even as early as the first missed menstrual period. Urine pregnancy test must be available at all health care facilities and the women who are found to be pregnant must be issued with the antenatal card and receive first antenatal care; this card is the principal record of the pregnancy and is filled in whenever the woman goes for ANC visit. Those who requested termination of pregnancy should be appropriately counseled and referred. Complete assessment of gestational age and risk factors can be made at the full antenatal visit. After one visit, a pregnant woman can be regarded as ‘booked’ for ANC. A full and relevant medical history is taken from the pregnant woman and includes:

- Current pregnancy
- Previous pregnancies, any complications and outcomes
- Medical conditions, including psychiatric problems and previous operations
- Family planning
- Allergies
- Use of medications
Use of alcohol, tobacco and other substances

Family circumstances

A physical examination is done and divided into three categories:

- A general examination which includes weight, height, heart rate, colour of mucous membranes, blood pressure, check oedema and palpations for lymph nodes.
- A systemic examination which includes teeth, gums, breasts, thyroid, heart and lung functions.
- Examination of pregnancy including inspection, palpation and auscultation of the pregnant uterus, with measurement of the symphysis-fundal height in centimetres and mid-upper arm circumference which gives useful information on nutritional status in pregnancy (DOH 2015:35).

Pregnant women undergo essential screening investigations which include syphilis serology, rhesus (D) blood group, haemoglobin level, HIV, protein and glucose in urine. All pregnant women are given supplements of ferrous sulphate tablets 200mg daily to prevent anemia, calcium tablets 1000mg daily to prevent complications from pre-eclampsia, folic acid 5mg daily and tetanus toxoid to prevent neonatal tetanus.

Final assessment should include checklist for BANC, information must be provided to all pregnant women on five danger signs to be aware in pregnancy which is severe headache, abdominal pain, and drainage of liquor, vaginal bleeding and reduced fetal movements. At the end of the first visit pregnant woman should be given a provisional delivery plan (DOH 2015:38).

Mom Connect is a National Department of Health initiative which uses mobile technology to register all pregnancies across South Africa according to Haas (2016:47) this project was launched on 21 August 2014 by the national minister of health. The project is aimed at assisting pregnant women with information during pregnancy and child birth by sending personalised messages to each woman in the registry and also allows pregnant women to engage with the health system through help desk tools and services.
2.2.2 Basic antenatal care

The study conducted by Ngxongo, Sibiya and Gwele (2016:3) on evidence of application of the Basic antenatal care principles of good care and guidelines in pregnant women’s antenatal care records stated that basic antenatal care (BANC) is an approach that is used in the public institution of South Africa to provide health care service to pregnant women according to National Department of Health and was introduced based on the belief that good quality antenatal care could reduce maternal and perinatal mortalities.

The study conducted by Ngxongo and Sibiya (2011:85) on factors influencing successful implementation of basic antenatal care approach in primary health care facilities in eThekwini district, KwaZulu-Natal revealed that the process of implementing BANC programme was first initiated as a pilot project in eThekwini district at a few facilities in the 2007. The campaign was done investigating the roll out of BANC in primary health care facilities found the following to impede the implementation process:

- Lack of training of midwives on BANC
- Shortage of staff
- Lack of cooperation from referral hospitals
- Poor support of facility management
- Challenge with transportation of specimens
- Unavailability of BANC guidelines

2.3 THE HEALTH BELIEF MODEL

Health Belief Model is one of the first theories developed exclusively for health related behaviors. It originated in the 1950s and has been thoroughly tested in variety of situations since that time. The Health Belief Model is one of the mostly used conceptual frameworks for understanding health behavior. The module postulates that health seeking behavior is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat (Polit & Beck 2012:136). In the context of this study, HBM is used to identify perceptions of seriousness, susceptibility and barriers that might explain why some women do not start antenatal care earlier to prevent perinatal and maternal mortality and possible cues to action and
modifying variables that might change the behavior of late antenatal booking. It is also used to identify the benefits of early antenatal care booking which are perceived as the outcomes relating to reducing susceptibility and the benefits are motivators which encourage pregnant women to start antenatal care early.

2.3.1 Core assumptions of the health belief model

Health Belief Model is based on three assumptions:

- It assumes that a person will take health related action if that person feels that a negative health condition can be avoided.
- It also assumes that a person will take action if that person has a positive expectation that by taking a recommended action they will avoid a negative health condition.
- It further assumes that a person takes a health related action if the person believes that she can successfully take the recommended action (Sharma & Romas 2012:94).

There is a strong relationship between the above assumptions and the required action of this study is to book antenatal care early. It is assumed that those who started antenatal care early have any pregnancy related complications diagnosed; and the disease is treated before delivery of the baby. The HBM has spelt out constructs representing the perceived threat, benefits and cues to action. As stated by Polit and Beck (2012:136), these include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy.

2.3.1.1 Perceived susceptibility related to antenatal booking

This is a person’s perception that a health problem is personally relevant or that diagnosis is accurate (Polit & Beck 2012:126). This also explains one’s chances of getting a condition. A person’s perception that a health problem is personally relevant will contribute to taking of required action by the individual. Pregnant women require understanding of how pregnancy will affect them so that they can acknowledge that they are at risk of getting complications. The greater the perceived risk, the greater the likelihood of engaging in the aimed behaviors to decrease the risk. A study conducted in
Nigeria Onoh et al (2012:169) on patterns and determinants of antenatal booking revealed that a significant percentage of respondents who booked early for antenatal care were mainly due to sickness, parent’s advice, friend’s advice and including doctors and nurses advice with no indication of perceived susceptibility.

According to WHO (2012:4) all pregnant women with uncomplicated pregnancies should access at least four ANC visits during the course of the pregnancy.

2.3.1.2 Perceived severity due to late antenatal booking

Even when one recognizes personal susceptibility, action will not occur unless the individual perceives the severity to be high enough to have serious implications (Polit & Beck 2012:136). This is one’s own opinion of how a condition is and what its consequences are if left untreated. When pregnant women recognizes that they are susceptible to getting a certain condition it does not really motivate them to take necessary action until they appreciate that getting the condition would have serious physical, psychological and social implications on themselves and their pregnancies or babies.

The study conducted by Kihara, Harries, Bissell, Kizito, Van Den Berg, Mueke and Gichangi (2013:23) on antenatal care and pregnancy outcomes in safe motherhood health voucher system in rural Kenya revealed that maternal mortality ratio was reported at 488 per 100 000 this was a far cry from the projected target of 147 per 100 000 live births, impoverished pregnant women were particularly vulnerable due to malnutrition, lower levels of education, less empowerment and financial insecurity resulted in delayed access to reproductive health.

Perceived severity of not attending antenatal care was identified in a study conducted in Mpumalanga’s Caroline hospital by Nyathi (2012:37) on an audit of perinatal mortality and morbidity at a district hospital revealed that 72.9% of perinatal mortality and morbidity could have been identified and corrected but it was impossible due to late booking in pregnancy, infrequent visit to antenatal clinic and never initiating antenatal care. Maternal mortality is caused mainly by HIV, the study conducted by Chweneyagae, Delis-Jarrosay, Farina, Fawcus, Godi, Khaole, Kunene, Mhlanga, Mbambisa, Mbombo, Molefe, Moodley, Moran, Pattinson, Rout, Schoon and Seabe (2012:17) on impact of HIV infection on
maternal deaths in South Africa concluded that among HIV positive pregnant women who died the majority of underlying causes of death was diagnosed during antenatal care but most women booked late for antenatal in the third trimester of pregnancy and the CD4 was less than 200. KwaZulu-Natal had the highest proportion of HIV positive maternal deaths and the estimated maternal mortality rate was 430 per 100 000 in South Africa.

2.3.1.3 **Perceived benefits of early antenatal care booking**

Perceived benefits are the patient’s beliefs that a given treatment will cure the illness or help prevent it (Polit & Beck 2012:136). It is this belief that gives them confidence to take action because they are sure of the outcomes.

Pregnant women are able to weigh the benefits and advantages of early antenatal care booking. Antenatal care improves the survival and health of babies directly by reducing stillbirths and neonatal deaths and indirectly by providing an entry point for health contacts with the woman at a key point in the continuum of care. Good care during pregnancy is important for the health of the mother and development of unborn baby. WHO (2016:1).

There are perceived benefits in early antenatal booking in the study conducted in Malawi by Banda (2013:8) on barriers to utilization of focused antenatal care among pregnant women the findings concludes that 85% of pregnant women agreed that antenatal care would enable them to receive vaccines, supplements, malaria prophylaxis and that early booking for antenatal care early will promote their health and protect their unborn babies from complications and this would establish strategies that clearly present the desired action.

2.3.1.4 **Perceived barriers contributing to late antenatal care attendance**

Perceived barriers can affect people’s decision making to take particular action and include the complexity, duration and accessibility of the treatment (Polit & Beck 2012:136). It is only when one realizes that they have the capacity to deal with these barriers that they would be able to take necessary action. Pregnant women can identify barriers preventing them to book for antenatal care earlier and will be able to identify ways to overcome those barriers. A study conducted in Canada by Heaman, Morris, Gregory, Tjaden and Cook (2014:12) on barriers, motivators and facilitators related to prenatal care
utilization among inner-city women in Winnipeg led to conclusion that negative attitudes towards pregnancy primarily due to having an unplanned or unwanted pregnancy were associated with increased odds of inadequate prenatal care including women who were thinking of having an abortion, 25% of cases did not think they needed antenatal care and 6.2% indicated they could take care of themselves during pregnancy. Psychosocial issues played a large role as one third of cases reported being depressed and problems with transportation were reported by 48.8% pregnant women who booked late for antenatal care.

According to a study conducted by Ifenne and Terkimbi (2012:239) on gestational age at booking for antenatal care in a tertiary health facility in North-Central Nigeria revealed that the African culture decisions in the family are male dominant and some women reported lack of permission from their husbands for early initiation of antenatal care.

The study conducted by Rahman and Brekke (2013:166) on antenatal and obstetric care in Afghanistan: a qualitative study among health care receivers and health care providers stated that the cost of obstetrical care including insecurity, lack of infrastructure, economic instability, poor communication, poor health infrastructure as well as lack of qualified health workers have influenced the patient’s perception of the accessibility of health care.

2.3.1.5 Cues to action (motivation)

Motivation is the desire to comply with a treatment (Polit & Beck 2012:136). This is when an individual feels the desire to take the necessary action after believing that they have capacity to do so. A person should be motivated to be able to deal with the expected barriers. The person should be motivated to comply with the prescribed treatment, to accept health care and engage in positive health activities.

A study conducted in Ghana by Pell, Menaca, Were, Afrah, Chatio and Manda-Tylor (2013:5) on factors affecting antenatal care attendance revealed that pregnant women trusted and follow the health care workers advice and instructions concerning their pregnancies, at all sites women stated that they attended ANC to monitor progress of their pregnancy or to check position of their unborn child, to identify problems during pregnancy and the importance of taking the medicines provided during ANC to ensure health of the pregnancy and development of the baby.
2.3.1.6 Self-efficacy (modifying factors)

Self-efficacy refers to the strength of an individual’s beliefs in his own ability to respond to difficult situations and to deal with any associated obstacles. Among the modifying factors that have been identified are personality variables, patient satisfaction and socio demographic factors (Polit & Beck 2012:136). This is confidence in one’s ability to be motivated to take action. Pregnant women should have confidence and believe that they are capable for booking antenatal care at less than 20 weeks of gestation so that any complications can be identified and corrected early.

The study conducted by Mokgatle and Tshabalala (2014:149) on utilization of antenatal care services and perceptions of early booking revealed that in East Ekurhuleni sub district clinics women were aware of ANC and PMTCT services. The first trimester was pointed as the best time to start ANC but women’s awareness and practices differed as they booked late. They didn’t comprehend the importance of early ANC booking since the majority booked in their second and third trimester including those with previous pregnancies. The women perceived ANC utilization as beneficial since they were able to relate to the services they obtained at the facilities. The mere fact that they came for ANC expressed the importance they attached to these services.

2.4 LITERATURE ON FACTORS ASSOCIATED WITH LATE ANTENATAL BOOKING

2.4.1 HIV-related factors

A study conducted in Limpopo province by Mothiba, Maputle and Tladi (2013:145) on causes of maternal deaths in a tertiary hospital revealed that denial of HIV diagnosis lead to delay in taking ARVs. Pregnant women test for HIV if they found that they are positive they do not go to hospital even if they are pregnant and the body struggles to cope with pregnancy and there is added issue of suppressed immune system by the HIV and this in itself results in several complications which sometimes lead to maternal death due to late antenatal care attendance where early diagnosis of complications could and treated. According to the study conducted by Amnesty International Researchers (2014:22) in KwaZulu-Natal and Mpumalanga on struggle for maternal health barriers to antenatal
care in South Africa it led to a conclusion that hundreds of pregnant women are dying needlessly in South Africa because they fear their HIV status may be revealed as they access antenatal care services and they fear the stigma of being known to be living with HIV.

2.4.2 Attitude of health workers

A study conducted by Solarin and Black (2012:364) on women’s antenatal care booking experience in inner-city revealed that a large proportion of pregnant women attend ANC late and the reasons given was the delay by health care workers in the provision of care and 40% of them were not booked in the first visit they were told to come back in another day, they were told they were still early in the pregnancy and they ended being booked in their third trimester. A study conducted in Malawi by Roberts, Sealy, Marshak, Mandataylor, Gleason and Mataya (2015:145) on the patient-provider relationship and antenatal care uptake at two referral hospitals revealed that pregnant women do not attend antenatal care early or do not attend at all as the nurses are always shouting and yelling at clients.

2.4.3 Distance problems

The study conducted in Pakistan by Amna (2015:38) revealed that 72% of pregnant women who booked late for antenatal care had challenges of distance to the health facilities. A study conducted by Sakala (2011:34) on assessment of the barriers to the utilization of antenatal care service in Kazungula district led to conclusions that distance to health service was mentioned as a barrier because walking to the clinic takes a lot of time and sometimes walking alone is also dangerous. In the study conducted in Khayelitsha by Nhemachema (2011:19) on factors influencing the gestational age at booking in primi-gravid clients within the prevention of mother to child transmission also revealed that the geographical positioning of a clinic may be itself a problem, a woman must be able to travel to the clinic and this must not cause too much for the woman doing a cost benefit analysis of attending the clinic, the trip from the outer reaches of Khayelitsha may require the use of public transport and it may take time to reach, so even if the antenatal service is free booking may be of lower priority.
2.4.4 Partner influence

A study conducted in the Western Cape by Muhwava, Morojele and London (2014:18) on psychosocial factors associated with early and frequency of antenatal care visits in a rural and urban setting in South Africa revealed that low levels of education of the husband can be a barrier to access antenatal care services, poor relationship with the baby’s father may also negatively influence antenatal care attendance which can also be caused by unstable relationships which causes inability to meet costs such as transport.

2.5 LEGISLATIVE FRAMEWORK FOR PERINATAL CARE IN SOUTH AFRICA

The legislative framework of perinatal care is described in various laws and Acts in South Africa to protect the rights of the mother and unborn baby and they are as follows:

2.5.1 The National Health Insurance (NHI) for South Africa

According to the NHI (2015:9), all South Africans will have access to needed promotive, preventive, curative, rehabilitative, palliative health services that are of sufficient quality and are affordable without exposing them to financial hardships. The right of access to quality health services will be on the basis of need and not socio-economic status. Maternal and child mortality still contributes significantly to overall mortality even though the specific contribution to overall mortality has decreased over time. The Medical Research Council’s Rapid Mortality Survey in 2014 reports that the maternal mortality ratio (MMR) which can be lowered through early antenatal care booking has reduced from 281 per 100 000 live births in 2008 to 197 per 100 000 live births in 2011.

- Maternal, child and women’s health (MCWH) services should be accessible to mothers, children, adolescents and women of all ages, the focus being on the rural and the urban poor and farm worker.
- MCWH services should be comprehensive and integrated.
- MCWH services should be efficient, cost-effective and of a good quality.
- Women and men will be provided with services which will enable them to achieve optimal reproductive and sexual health (South Africa 1997:49).
2.5.2 South Africa’s National Strategic Plan for a Campaign on Accelerated Reduction of Maternal and Child Mortality in Africa (CARMMA)

Maternal and perinatal mortality in South Africa remains unacceptable high according to November 2011 National Department of Health Report of the Health Data Coordination Committee, since its inception, the Saving Mothers (2011-2013) report identified major causes of maternal deaths such as non-pregnancy related infections mainly AIDS (50%), complications of hypertension (14%), pregnancy related infections(5%) and (9%) complications of pre-existing medical conditions such as cardiac conditions, diabetics etc., 40% of all maternal deaths were avoidable if they had started antenatal care earlier. The goal of the campaign 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 for quality maternal and child health care which Includes promotion for early antenatal care and attendance progressing towards MDG 5 and SDG 3 (CARMMA 2012:9).

2.6 MILLENIUM DEVELOPMENT GOALS AND SUSTAINABLE DEVELOPMENT GOALS

The global communities, South Africa included, committed themselves to the global goals which directly relates to maternal and child health, it is estimated that approximately 536,000 women die each year from pregnancy-related complications (WHO 2006:12) The target for MDG 5 was to improve maternal health by three quarters between 1990 and 2015 and also that women have access to ANC and other maternal health services to reduce maternal deaths, the target for MDG 4 was to reduce child mortality by two-thirds between by 2015 in under- five child mortality. The study conducted by Malqvist, Yuan, Trygg, Selling and Thomsen (2013:1) on targeted interventions for improved equity in maternal and child health in low and middle-income settings revealed that despite the end date of the MDG’s, evidence depicted that target levels under five and infant mortality (MDG 4) and maternal mortality (MDG 5) were not fulfilled at global level.

The post-2015 agenda includes sustainable development goals (SDGs), the SDGs will guide the next fifteen years of international development by creating a focused plan of action working towards sustainable development (Boucher 2015:1). According to the
s will strengthen the commitment made by the unfinished MDG;as as well as breaking new grounds. The SDG agenda will encompass ‘universal health care coverage, access and affordability as well as to put an end to preventable maternal, newborn and child death and Sustainable development goal 3 which is to ‘ensure healthy lives and promote well-being for all at all ages’ (United Nations 2014:21).

2.7 CONCLUSION

This chapter discussed the literature that is relevant to the study. It presented guidelines in South Africa on ANC, which directs health workers throughout the country on when ANC must start and procedures to be followed when offering these services. It is clear that low and middle income countries still experience late ANC booking and there is low uptake of these services even though this is crucial for the survival of both the pregnant woman and her unborn child. Several factors were shared which affect ANC initiation.

Chapter 3 discusses the research design and methodology.
CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 3 describes the research design and methodology used in the study. It begins by explaining the research design and methods used which includes the study population and its eligibility criteria, sample size, sampling technique used, source and method of data collection, data analysis methods, validity and reliability of the research instrument and ethical considerations. The overall aim of the study was to propose strategies to reduce late antenatal booking at selected clinics at Thulamahashe local area in Mpumalanga province.

3.2 RESEARCH DESIGN

Research design is the overall plan of addressing a research question including specifications for enhancing a study’s integrity (Polit & Beck 2012:741). Burns and Grove (2015:212) highlighted that a good research design would help the researcher to avoid bias while collecting data. The researcher used a quantitative, non-experimental, descriptive and cross-sectional design in order to establish factors contributing to late antenatal booking by pregnant women.

3.2.1 Descriptive design

Descriptive design is used to identify a phenomenon of interest, identify variables within the phenomenon, develop conceptual and operational definitions of variables and describe variables (Burns & Grove 2015:502). Through descriptive studies researchers describe what exists, determine the frequency in which something occurs, discover new meanings and categorize information. The outcome of descriptive research is the description of concepts, identification of relationships and development of hypothesis that provide a basis for future quantitative research. The researcher in this study chose to use the descriptive design to explore factors contributing to late antenatal booking at Thulamahashe local area.
Paditar (2013:6) states that descriptive designs are used to observe, document and describe a phenomenon occurring in its natural setting without any manipulation and are designed to gain more information about characteristics within a particular field in the real world and provides an impression of a situation as it occurs in a natural setting.

Monette, Sullivan and De Jong (2011:4) defined descriptive research as research that focuses on description or an attempt to discover facts or describing reality. This study gives a descriptive summary of the responses of all the relevant items for the sample of pregnant women who took part in the study.

### 3.2.2 Quantitative research paradigm

Quantitative research was used. Burns and Grove (2015:32) described quantitative approach as the formal, objective, rigorous, systemic process for generating numerical information about the world which is conducted to examine relationships among variables and determines the effectiveness of treatments or interventions on selected health outcomes in the world). According to Regionel (2015:2), the characteristics of quantitative research are:

- Data gathering instruments contains items that solicit measurable characteristics of the population (e.g. age number of children, educational status, economic status, etc.).
- Standardized pre-test instruments guide data collection thus ensuring accuracy, reliability and validity of data.
- Researchers can repeat the quantitative methods to verify or confirm findings in another setting.
- Statistical analysis of the data is usually done after data collection.

The researcher adopted quantitative approach because it involves systemic collection of numeric and categorical quantitative data (Polit & Beck 2012:14). The researcher tried to achieve objectivity by using a self-designed questionnaire to collect information from respondents. Data obtained was rooted in objective reality and gathered through senses, meaning that findings were grounded in reality than in researcher’s personal beliefs. Analysis of data was done using statistical procedures (Polit & Beck 2012:14).
3.2.3 **Non-experimental approach**

According to Polit and Beck (2012:735), non-experimental research is described as studies in which the researcher collects data without introducing an intervention. Brink et al (2012:100) add that in non-experimental design there is no manipulation of the independent variable, and therefore no intervention, nor is the setting controlled.

Patidar (2013:56) furthermore explained that non-experimental designs can be used to conduct studies in which it is unethical to manipulate the independent variable and in research situations where it is not practically possible to conduct experiments and also in studies in which the researcher wishes to explore events, people or situations as they naturally occur.

3.2.4 **Cross-sectional studies**

This research used a cross-sectional design. A cross-sectional study involves the collection of data at a specific time and are used by researchers to learn about a particular group of people, evaluate a program or conduct a community needs assessment (Cottrell & McKenzie 2011:197). According to Polit and Beck (2012:186), Cross-sectional studies are economical, less time consuming and uses questionnaires, personal and telephonic interviews as data collection methods. A cross-sectional study was conducted and data were obtained by use of a questionnaire (Annexures D & G).

3.3 **RESEARCH METHOD**

Research methods are techniques researchers use to structure a study and to gather and analyze information relevant to the research question (Polit & Beck 2012:12). This section describes sampling, population of the study, the selection of the sample, data collection method, data collection instrument, validity, and reliability of the instrument, ethical considerations and data analysis.
3.3.1. Population

Burns and Grove (2015:508) define population as all elements (people, objects, events or substances) that meet the sample criteria for inclusion in a study.

3.3.1.1 Target population

The study population known as target population is the entire population in which a researcher is interested and to which he or she would like to generalize the study results Polit and Beck (2012:744).

For this study the target population was pregnant women who had started antenatal care booking after 20 weeks of gestation at five clinics in Thulamahashe local area who met eligibility criteria.

3.3.1.2 Sample selection

Sampling is defined by Burns and Grove (2015:37) as a process of selecting respondents who are representative of the population being studied. The sampling theory was developed to determine mathematically the most effective way to acquire a sample that would accurately reflect the population under the study. According to Polit and Beck (2012:282), a sample is a subset of a population comprising those selected to participate in a study and sampling is the process of selecting a portion to represent the entire population. The sample of this study was selected from the women who came to the clinic for antenatal care during the data collection period who had started antenatal care after 20 weeks of gestation and also was 18 years of age or above. Simple random sampling was used which ensured some degree of precision in estimating some population parameters. Every member of the population had a chance of being included in the sample and allowed researchers to estimate the magnitude of sampling error.

3.3.1.3 Sampling technique

Pregnant women who attended antenatal care on each day is between ten and twenty, from this number those who started antenatal care after 20 weeks of gestation were between five and nine. Since the number was small all eligible pregnant women were
included in the study. The probability sampling technique was applied as each person or element has an opportunity to be selected for a sample and it increases the sample’s representativeness of the target population (Burns & Grove 2015:257).

3.3.1.4 Sample size

According to DHIS data from 01 April 2013 to 31 March 2014 Thulamahashe local area had 513 antenatal first visits out of this number 189 booked after 20 weeks. The sample size was calculated by proportion formula considering the prevalence of late antenatal booking and 95% confidence of interval (Polit & Beck 2012:407). The total sample was 127 which were shared amongst all Thulamahashe local area facilities.

3.3.1.5 Sampling criteria

Population characteristics are specified using eligibility criteria. Eligibility criteria are the criteria designating the specific attributes of the target population, by which people are selected for inclusion in a study (Polit & Beck 2012:274). Burns and Grove (2015:251) stated that eligibility criteria include a list of characteristics essential for eligibility or membership in the target population: The exclusion criteria are those characteristics that can cause an element to be excluded from the target population.

Inclusion criteria

- Pregnant women who had started antenatal care after 20 weeks of gestation 1st or subsequent visit.
- Pregnant women above 18 years of age.
- Pregnant women who had given informed consent (written).

Exclusion criteria

- Pregnant women who started antenatal care before 20 weeks of gestation.
- Pregnant women below 18 years of age.
- Pregnant women who were too sick to participate in the study.
- Eligible respondents unable or unwilling to give consent.
3.3.1.6 Ethical issues related to sampling

The recruitment took place in five clinics of Thulamahashe local area during regular subsequent ANC visits of eligible respondents. The respondents were informed that the study was not part of their routine antenatal care, participation was voluntarily and an informed consent form (Annexure A) was signed by respondents. They were informed that they could withdraw from the study at any point of time if they did not wish to continue. The respondents were assured that the information would be kept confidential, a confidentiality binding form (Annexure F) was signed and also that the information would be used for scientific purpose.

3.3.2 Data collection

According to Burns and Grove (2015:63), data collection involves the precise and systematic gathering of information relevant to the research purpose or objectives, questions or hypothesis of a study and was supported by Polit and Beck (2012:725) who stated that it is gathering of information to address a research problem.

3.3.2.1 Data collection approach and method

A structured questionnaire (Annexures D and G) was use to collect data which is the quantitative data collection methods after obtaining permission from respondents (Annexure A). Data collection for quantitative studies is done according to a structured plan that indicates the type of information to be collected and how the information will be collected, structured method tend to limit the respondents to a fixed set of questions answered using predetermined responses and respondents have limited opportunity to explain their responses however the data is relatively easy to analyze (Polit & Beck 2012:297).

Data was collected using a researcher designed questionnaire. Respondents who were able to read and write were given the questionnaire to complete under the supervision of the researcher, respondents who were not able to read and write were asked questions by the researcher who completed the questionnaire and ensured that there was lack of interviewer bias, the possibility of anonymity and privacy to encourage candid responses.
on sensitive issues (Babbie 2013:309). The questionnaires were checked before the respondents left the clinic to ensure that all questions were answered.

3.3.2.2 Developing and testing of data collection instruments

The data collection instruments used for this study was a self-designed structured questionnaire (Annexures D and G) which was used to collect data from respondents. A questionnaire is a document containing information specifically designed to elicit information that will be useful for analysis (Babbie 2013:272). The advantages of questionnaire as stated by Polit and Beck (2012:305) are as follows:

- Questionnaires offer the possibility of anonymity which is crucial in obtaining honest response particularly if questions are sensitive.
- They are less costly than other data collection methods.
- They tend to have a fair degree of reliability because they are structured and predetermined and cannot be varied in wording and the order in which they are answered.

A pilot study of the questionnaire was conducted. Ten questionnaires were administered at clinics not selected for the study but in Bushbuckridge sub-district. The most efficient way to find out how good a questionnaire was, is to pilot it with a group of respondents who have the same characteristics and those involved in the study who were pregnant women who started antenatal care after 20 weeks of gestation women who met the inclusion criteria. Participants’ feelings and thoughts about questionnaire were captured and the feedback was integrated in the final version of the instrument. Polit and Beck (2012:195) refer to pilot study as a small-scale version or trial run designed to test the methods to be put in a larger, more rigorous study. The feedback was integrated into the final version of the instrument.

3.3.2.3 Characteristics of data collection instrument.

The structured questionnaire contained twenty questions and was both in English (Annexure A) and Xitsonga (Annexure E) languages as the majority of Bushbuckridge community are Tsonga people. The questionnaire consisted of both open and close ended questions. The open-ended questions allowed people to respond in their own words in narrative fashion meanwhile closed-ended questions close-ended questions
gave the respondents opportunity to choose the one that most closely matches the appropriate answer (Polit & Beck 2012:297). The questionnaire focused on these areas: a) biographic information, b) antenatal care attendance, c) antenatal care services.

3.3.2.4 Data collection process

Permission to collect data was sought and granted by University of South Africa Health Studies Higher Degree Committee (Annexure H), The Research and Ethics committee in Mpumalanga province (Annexures C and I), The Bushbuckridge sub-district manager (Annexure I) and the Thulamahashe local area supervisor (Annexure B). Pregnant women who booked for the first time after 20 weeks of gestation and pregnant women with subsequent visits who had started antenatal care after 20 weeks of gestation were the sampled. For every woman selected the researcher explained the study fully, written consent was sought from the respondents and were assured of anonymity and confidentiality. The interviews were conducted while the respondents were still waiting in the queue to be seen by the midwife. This was done to minimise their waiting time. The questionnaires were completed in the clinic to ensure that the selected respondents were the ones who filled in the questionnaire.

3.3.3 Data analysis

Polit and Beck (2012:725) define data analyses as the systematic organisation and synthesis of research data. The analysis was based on the completed questionnaires from each respondents from five clinics. Each questionnaire was given a unique number to facilitate error tracking where necessary. An excel spread sheet was used for exploration and analysis of data. Data was checked for errors and cleaned. The spread sheet was imported to STATA Statistical Analysis software for editing and analysis. Descriptive statistics were used to summarise data through the use of measures of central tendency and dispersion and continuous variables such as maternal age and gestational age, categorical variables such as marital status, benefits of antenatal care. The researcher used frequency tables and percentage distribution to describe the results, inferential statistics, Pearson’s r, Chi-square test and Fisher’s exact test were used for comparison. The p-value of less than 0.5 was considered statistically significant.

3.4 INTERNAL AND EXTERNAL VALIDITY OF THE STUDY
Babbie (2013:160) defines validity as the extent to which empirical measure adequately reflects the real meaning of the concept under consideration and Polit and Beck (2012:744) refers to validity as the degree to which an instrument measures what it is intended to measure.

3.4.1 Internal validity

Internal validity is the extent to which the effects detected in the study are a true reflection of reality rather than the results of extraneous variables (Burns & Grove 2015:506). The questionnaire that was used to collect data was similar for all respondents. The questionnaire was reviewed by University of South Africa (UNISA) Health Studies Higher Degree Committee, Thulamahashe local area supervisor, Bushbuckridge sub-district manager, the questionnaire was validated by experts in Maternal and Child health such as advanced midwives, experienced midwives and the Mother, Child and Women’s Health (MCWH) coordinators to give inputs before the tool was used. The questionnaire was piloted on ten antenatal respondents who started antenatal care after 20 weeks of gestation at clinics not selected for the study. The researcher administered the questionnaire to respondents who volunteered to be included in the study to attain a quality tool that was stable before embarking on the main study.

3.4.2 External validity

Burns and Grove (2015:504) state that external validity is concerned with the extent to which study findings can be generalized beyond the sample used in the study. This was not possible because the sample size was small compared to the number of clinics in the sub-district therefore results could not be generalized.

3.4.3 Reliability

Reliability is a matter of whether a particular technique, applied repeatedly to the same object, yields same results (Babbie 2013:157). Reliability is the degree of consistency or dependability with which an instrument measures an attribute (Polit & Beck 2012:741). All respondents were asked the same questions and were required to choose among the same alternative answers. Further probing by the researcher was discouraged to prevent
interviewer bias. A pilot study of the questionnaire was conducted to ensure the instrument’s precision.

3.5 ETHICAL CONSIDERATIONS

This section explains the procedures that the researcher has taken to obtain approval to carry out research, to protect the respondents and to maintain the scientific integrity of the research. Tappen (2011:173) defines research ethics as norms for conduct that distinguish between acceptable and unacceptable behaviour when doing research, Polit and Beck (2012:727) define ethics as a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligation to the study participants. Ethical considerations in the conduct of research were followed to prevent ethical dilemmas. Ethical clearance was obtained from the Research and Ethics Committee at UNISA Department of Health Studies (Higher Degree Committee). The study was conducted after authorization by the Research and Ethics committee in Mpumalanga province, Bushbuckridge sub-district manager and the supervisor Thulamahashe local area. The following ethical principles guided the researcher:

3.5.1 Beneficence

According to Brink et al (2012:35), beneficence states that researchers need to secure the well-being of the respondents who has the right to protection from physical, psychological, emotional, spiritual, economic, social, legal, discomfort and harm. The respondents were protected from exploitation; they were assured that their participation or information they provided will not be used against them. The research was conducted by a qualified researcher. The researcher did not ask questions that needed respondents to reveal sensitive information which may cause discomfort to them.

3.5.2 Justice

Polit and Beck (2012:155-156) describe justice as respondent’s right to fair treatment and right to privacy. The respondents were selected for reasons related to the study problem and were not selected according to class and race. The respondents had rights to confidentiality and the confidentiality binding form (Annexure F) was signed as a pledge that any information provided will not be reported in a manner that identifies them. The
researcher kept the collected information anonymous by keeping it in a safe place that was known only by the researcher and any information linked to the participants were kept confidential. No data was gathered by the researcher without the respondent’s knowledge such as using hidden cameras, recorder or microphones. The institution kept data in strict confidentiality by ensuring that on unauthorized person get access to data.

3.5.3 Respect for human dignity

Polit and Beck (2012:154) describes this principle as the right to full disclosure. The respondents have the right to decide voluntarily whether they want to participate in a study or not without any penalty. The respondents signed an informed consent form which has a clear information regarding participation in the study which also ensured that respondents were not forced to take part. Draft of the consent form accompanied the research proposal. They had the rights to ask questions, refuse to give information or to withdraw from the study. The cultural beliefs of the respondents were respected. The researcher ensured that no name, address and file number of respondents. To protect the rights of the institution permission was requested from Mpumalanga Department of Health, Bushbuckridge sub-district manager and Thulamahashe local area supervisor to authorize the researcher to carry out the study.

3.5.4 Scientific integrity of the researcher

To ensure scientific honesty on the part of the researcher, the researcher avoided research misconducts. Burns and Grove (2015:122) defined research misconduct as the fabrication, falsification or plagiarism in processing, performing or reviewing research or in reporting research results. Fabrication involves making up data or study results, and falsification involves manipulating research materials, equipment or processes it also involves changing or omitting data (Polit & Beck 2012:169). To prevent fabrication and falsification the researcher made sure that all collected data was collected and analyzed correctly. Plagiarism involves the appropriation of someone’s ideas, results or words without giving due credit, including information obtained through confidential review of research proposals or manuscripts (Polit & Beck 2012:169). Plagiarism was avoided through acknowledging all the resources that were used in the research as well as providing a list of references which indicate all these sources.
3.6 CONCLUSION

Chapter 3 discussed research methodology used in the research which included research design, sampling, data collection, validity and reliability, data analysis and ethical considerations. Chapter 4 discusses the analysis of the research results.
CHAPTER 4

ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESULTS

4.1 INTRODUCTION

Chapter 4 presents the analysis and interpretation of the results. The purpose of the study was to establish and describe factors contributing to late antenatal care booking and the possible answers would be based on the results of the study.

4.2 DATA MANAGEMENT AND ANALYSIS

The sample size as calculated by the statistics was 127 pregnant women who started antenatal care after 20 weeks of gestation, who were eighteen years and older and met the eligibility criteria. Data was collected using a self-designed questionnaire which consisted of both close and open ended questions. All selected respondents participated giving a 100% response rate. Confidentiality was maintained during data collection to encourage respondents to open up and give information. An excel spreadsheet was used for the exploration of data; the spreadsheet was then imported to STATA analytical software for editing and analysis.

4.3 SAMPLE CHARACTERISTICS

This section describe the respondents' age, marital status, educational level, distance to health facility and occupation.

4.3.1 Age distribution

All hundred and twenty seven respondents indicated their age as shown in Table 4.1. Most of the respondents were between ages 20 to 26 years (n=46, 36.2%), this may be because this is the age at which most respondents were married and trailed by 27 to 32 years (n=34, 26.8%). The respondents’ age decreased with increasing age. The age was of significance in this study to try and find if it has an effect in late antenatal care booking.
Since the study included only respondents who were 18 years and above, the age category for below 20 years of age ranged from 18 to 19 which was (n=13, 10.2%).

Table 4.1: Age distribution of pregnant women who booked ANC after 20 weeks of gestation at Thulamahashe (n=127)

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-19</td>
<td>13</td>
<td>10.2</td>
</tr>
<tr>
<td>20-26</td>
<td>46</td>
<td>36.2</td>
</tr>
<tr>
<td>27-32</td>
<td>34</td>
<td>26.8</td>
</tr>
<tr>
<td>33-38</td>
<td>23</td>
<td>18.1</td>
</tr>
<tr>
<td>39-44</td>
<td>10</td>
<td>7.9</td>
</tr>
<tr>
<td>45-50</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.3.2 Marital status

Regarding the marital status, most respondents were single (n=59, 46.5%) followed by the ones who were married (n=33, 26%) and those in stable relationship (n=12, 9.4%). This was also supported by results from the study conducted in Canada by Heaman, Morris, Gregory, Tjaden and Cook (2014:10), on barriers, motivators and facilitators related to prenatal care utilization among inner-city women in Winnipeg concluded that there was a higher rate of single parent families and 60% of the respondents were single, divorced or separated and lacked support from husbands or partners which might be the case in this study as the majority (46.5%) were single. The study conducted by Kwambai, Dellicour, Desai, Ameh, Person, Achieng, Mason, Laserson & Kulle (2013:134) on perspectives of men on antenatal and delivery care service utilization in rural western Kenya revealed that men motivated women to take rest and refrain from too much manual labour and they took some of the domestic duties e.g. cultivating land, fetching water and firewood as they are detrimental to the health of both the mother and unborn child, some men also reported purchasing additional food for the pregnant women to supplement diet and buying maternity clothing for their pregnant spouses as tight fitting clothes could affect health of the fetus. Some mentioned reminding their wives about clinic appointments and occasionally accompanying them to the clinic. Similar findings were also revealed in a study conducted in Uganda by Kawungezi, AkiiBua, Aleni, Chitavi, Niwaha, Kazibwe, Sunya, Mumbere, Mutesi, Tukei, Kasangaki & Nakubulwa (2015:140) on attendance and utilization of antenatal care services that empowering husbands to
escort their wives to attend ANC would encourage and motivate many mothers to attend and complete ANC visits, adhering to drugs and utilizing other ANC services since this would make planning easier.

Table 4.2: Marital status of pregnant women who booked ANC after 20 weeks of gestation at Thulamahashe (n=127)

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>33</td>
<td>26.0</td>
</tr>
<tr>
<td>Single</td>
<td>59</td>
<td>46.5</td>
</tr>
<tr>
<td>Widowed</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Divorced</td>
<td>11</td>
<td>8.7</td>
</tr>
<tr>
<td>Stable relationship</td>
<td>12</td>
<td>9.4</td>
</tr>
<tr>
<td>Separated</td>
<td>9</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.3 Level of education

All respondents as reflected from Table 4.3, (n=68, 53.5%) attained high school, subsequently followed by those with primary level of education (n=38, 29.9%). Few (n=16, 12.6%) had a tertiary qualification. Data on education was collected to find out if there was an association between being educated and booking for antenatal care as well as the level of knowledge. The majority of the respondents have reached high school level and only (n=5, 3.9%) never went to school. Similar results were obtained from the study conducted by Matyukura (2014:91) on knowledge and utilisation of antenatal care services by pregnant women at a clinic in Ekurhuleni, that pregnant women who had passed grade 11 up to post matric 56.3% booked late for antenatal care due to working conditions and were not able to go to clinic as it does not operate during weekends or closes before they knock off from work. The study conducted in Ethiopia by Gebremeskel, Yohannes and Admasu (2015:7) on timing of first antenatal care attendance and associated factors among pregnant women revealed that 82.6% of pregnant women initiated antenatal care late, this was due to the fact that majority of pregnant women had no education and only attained primary school.
Table 4.3:  Education level of pregnant women who booked ANC after 20 weeks of gestation at Thulamahashe (n=127)

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>38</td>
<td>29.9</td>
</tr>
<tr>
<td>High school</td>
<td>68</td>
<td>53.5</td>
</tr>
<tr>
<td>Tertiary</td>
<td>16</td>
<td>12.6</td>
</tr>
<tr>
<td>None</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td>127</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### 4.3.4 Mode of transport to health facility

In terms of transport to the antenatal care clinic, the majority of respondents (n=59, 46.5%) were residing at a walking distance from the health care facility, the majority of them (n=40, 31.5) used taxi to reach the clinic and (n=9, 7.1%) drove to the clinic and (n=11, 8.7%) used a bus to the clinic. Distance to some health facilities made pregnant women to take 2 taxis or 2 buses (n=8, 6.3) which was assumed as expensive for a pregnant woman and contributed to late antenatal care so that they may have few visits before giving birth. One may conclude that the majority of the respondents did not have high transport costs that can prevent them from attending antenatal care at less than 20 weeks of gestation and they attended at an advanced stage so that they might have few visits before giving birth. The study conducted in Nigeria by Ajayi and Osakinle (2013:3), on socio demographic factors determining the adequacy of antenatal care among pregnant women visiting Ekiti state primary health centers, concluded that the proportion of those who used private means of transport had their first antenatal booking in the first trimester compared to 62.3% of late bookers who walked to health facilities. The study conducted at Mulago hospital in Kampala Uganda by Kisuule, Kaye, Najjuka, Ssematimba, Arinda, Nakitende and Otim (2013:121) on timing and reasons for coming late for first antenatal care visit by pregnant women revealed that 27.5% of the study participants agreed that they did not have money for transport to bring them to the hospital while 9.3% thought that they had to pay for the antenatal care services.
Table 4.4: Mode of transport to health facilities used by pregnant women who booked ANC after 20 weeks of gestation at Thulamahashe local area (n=127)

<table>
<thead>
<tr>
<th>Mode of transport</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking distance</td>
<td>59</td>
<td>46.5</td>
</tr>
<tr>
<td>Taxi</td>
<td>40</td>
<td>31.5</td>
</tr>
<tr>
<td>Bus</td>
<td>11</td>
<td>8.7</td>
</tr>
<tr>
<td>Own car</td>
<td>9</td>
<td>7.1</td>
</tr>
<tr>
<td>2 taxis or 2 buses</td>
<td>8</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.5 Occupation

The results also showed that the majority of the respondents were not employed, but were predominantly housewives (n=105, 82.7%). Only (n=12, 9.4%) were civil servants and 7.9% were having personal businesses. It may be concluded that most pregnant women were financially dependent on someone, based on the findings of the study conducted by Solarin and Black (2013:361) on women's antenatal care booking experience in inner-city of Johannesburg, stated that most 57.7% of respondents who started antenatal care after twenty weeks of gestation were housewives and unemployed.

Table 4.5: Occupation of pregnant women who booked ANC after 20 weeks of gestation at Thulamahashe (n=127)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil servants</td>
<td>12</td>
<td>9.4</td>
</tr>
<tr>
<td>Personal business</td>
<td>10</td>
<td>7.9</td>
</tr>
<tr>
<td>Housewife</td>
<td>105</td>
<td>82.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.4 COMPARISON OF PARAMETERS IN LATE ANTENATAL BOOKING AMONG DIFFERENT AGE GROUPS

Table 4.6 indicates comparisons of various parameters well known to contribute to late antenatal booking. These parameters were compared in relation to different age groups for mainly two reasons. First to standardize age, as a bias for late antenatal booking and also to illustrate the contribution of age towards late antenatal booking. Of the hundred
and twenty seven respondents, the majority (n=41, 34.2%) were young and had at least three children during the study period, or were gravida three, and were between ages of 20 to 26 years of age, they were n=42 (36.2%), followed by pregnant women between ages of 27 to 32 years of age n=34 (26.8%). Among all the age groups, parity had a significant contribution as a single factor for late attendance among the pregnant women (X²=114.070 and p=0.0000) (as shown in Table 4.6), the results are similar to the results of the study conducted in Ethiopia by Yilala (2015:44) on assessment of late initiation of antenatal care and associated factors among antenatal attendees in selected health centers of Addis Ababa which concluded that 94.6% of the respondents had pregnancies before and started antenatal care late due to experience of pregnancy compared to women who had no previous experience of pregnancy as they were more careful with their first pregnancies and therefore started antenatal care earlier. The number of pregnant women increased from 10.2% among women aged 18 to 19, to 36.2% at 20 to 26 years of age, and decreased with increasing age.

A study conducted in Pakistan by Sohaq, Memon, Bhatti and Azeem (2013:17) on factors affecting utilization of antenatal care: the opinion by pregnant women concluded that inadequate use of antenatal care is associated with high parity and low education as 60% of the respondents had highest parity. In the analysis of results, it was further investigated if access to antenatal information had a contribution to late attendance of antenatal care from the respondents.

Majority of study respondents (n=120, 94%) had knowledge about antenatal care and (n=65, 51%) obtained antenatal information from friends and family, those with poor information on antenatal care might have misinformed the respondents. This was also supported by a study conducted in Ethiopia by Gudayu (2015:97) on the proportion and factors associated to late antenatal care booking among pregnant women in Gondor revealed that 72% of the late antenatal care bookers didn’t get information from health workers The respondents who had previous pregnancies (n=87, 69%) had started antenatal between three and six months and (n=70, 55%) thought the best time to start antenatal care was between three and six months of gestation.
Table 4.6: Comparison of parameters in late antenatal care booking among different age groups

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Age groups (years)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parity</td>
<td></td>
<td>18 to 20 yrs</td>
<td>21 to 26 yrs</td>
<td>27 to 32 yrs</td>
<td>33 to 38 yrs</td>
<td>39 to 44 yrs</td>
<td>45 to 50 yrs</td>
<td>Total</td>
</tr>
<tr>
<td>One</td>
<td></td>
<td>13 (48.1%)</td>
<td>8 (29.6%)</td>
<td>5 (18.5%)</td>
<td>1 (3.7%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>27 (100.0%)</td>
</tr>
<tr>
<td>Two</td>
<td></td>
<td>4 (14.3%)</td>
<td>14 (50.0%)</td>
<td>6 (21.4%)</td>
<td>4 (14.3%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>28 (100.0%)</td>
</tr>
<tr>
<td>Three</td>
<td></td>
<td>0 (0.0%)</td>
<td>16 (39.0%)</td>
<td>16 (39.0%)</td>
<td>7 (17.1%)</td>
<td>2 (4.9%)</td>
<td>0 (0.0%)</td>
<td>41 (100.0%)</td>
</tr>
<tr>
<td>Four</td>
<td></td>
<td>0 (0.0%)</td>
<td>4 (25.0%)</td>
<td>6 (37.5%)</td>
<td>6 (37.5%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>16 (100.0%)</td>
</tr>
<tr>
<td>Five</td>
<td></td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>2 (50.0%)</td>
<td>2 (50.0%)</td>
<td>0 (0.0%)</td>
<td>4 (100.0%)</td>
</tr>
<tr>
<td>Six</td>
<td></td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>1 (9.1%)</td>
<td>3 (27.3%)</td>
<td>6 (54.5%)</td>
<td>1 (9.1%)</td>
<td>11 (100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>17 (13.4%)</td>
<td>42 (33.1%)</td>
<td>34 (26.8%)</td>
<td>23 (18.1%)</td>
<td>10 (7.9%)</td>
<td>1 (0.8%)</td>
<td>127 (100.0%)</td>
</tr>
<tr>
<td>X²=114.070</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>p=0.000</td>
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<tr>
<td>2. Access of any antenatal information</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>13 (10.8%)</td>
<td>40 (33.3%)</td>
<td>34 (28.3%)</td>
<td>22 (18.3%)</td>
<td>10 (8.3%)</td>
<td>1 (0.8%)</td>
<td>120 (100.0%)</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>4 (57.1%)</td>
<td>2 (28.6%)</td>
<td>0 (0.0%)</td>
<td>1 (14.3%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>7 (100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>17 (13.4%)</td>
<td>42 (33.1%)</td>
<td>34 (26.8%)</td>
<td>23 (18.1%)</td>
<td>10 (7.9%)</td>
<td>1 (0.8%)</td>
<td>127 (100.0%)</td>
</tr>
<tr>
<td>X²=13.327</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=0.021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sources of antenatal information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From friends and family</td>
<td></td>
<td>6 (9.2%)</td>
<td>27 (41.5%)</td>
<td>15 (23.1%)</td>
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4. **Periods of previous antenatal care visits**

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5. **Best time to start antenatal care**

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<td>17 (13.4%)</td>
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Table 4.7  Correlation of factors associated with late antenatal care booking

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</tbody>
</table>

**.Correlations is significant at the 0.01 level (2-tailed).
*.Correlation is significant at the 0.05 level (2-tailed)
Spearman test for correlation was used to identify the direction and the strength of the association between various factors contributing to late antenatal booking in the study (Table 4.7).

Parity and access to information was significantly associated with age. The correlation was positive and negative (.630 and -.224) respectively. Marital status was not significantly associated with any of the other variables. However, education level was significantly associated with distance, occupation and parity (.200,.428 and -.256). Data on education was collected to find out if there was an association between being educated and booking for antenatal care as well as the level of knowledge respondents had. Both parity and occupation were negatively related to the level of education, whilst distance was positively associated with level of education in the results as illustrated on Table 4.7, minority of the respondents had tertiary education only (n=16, 12.6%), which could have led to (n=105, 82.7%) of the respondents being unemployed or housewives contributing to lack of money for transport costs to cover the distance to the antenatal clinic.

Furthermore, respondents were asked questions relating to the most appropriate time for starting antenatal care and the majority (n=70, 55%), stated that it was between three and six months of gestation. From the results, it is worth noting that parity was significantly associated with the stage or period at which respondents regarded as the most appropriate to start antenatal care during previous pregnancies (-.322), though negatively associated. In addition, the stage or period at which respondents regarded as the most appropriate to start antenatal care visit during previous pregnancies was significantly associated with stage or period which was regarded as the most appropriate to start antenatal care visit with the current pregnancy and what was regarded as the best time to start antenatal care visit.

It was important to enquire about benefits of antenatal care hence closed ended questions with possibility of multiple responses, to determine the level of awareness and prioritization. According to the results the following were prioritized as more beneficial by (n=27, 21.2%) that it was to get tested for HIV, (n=25, 19.6%) was to confirm pregnancy and (n=21, 16.5%) were having problems with the current pregnancy which may also indicate that if there were no problems they would have not initiated antenatal care. The benefits of attending antenatal care early in pregnancy was weakly associated with
occupation and reasons why a pregnant woman should seek antenatal care, and not significantly associated with the best time to start seeking antenatal care.

4.5 REASONS FOR LATE ANTENATAL CARE BOOKING

Figure 4.1 shows the commonest scaled reasons which showed how much respondents agreed or disagreed with a particular statement. Most respondents (79%) strongly agreed that the reason they attended antenatal care late was because of long waiting time at the clinics. This was supported by a study conducted by Nhemachema in Khayelitsha (2011:20) on factors influencing gestational age at booking in primigravid clients concluded that long waiting time at the clinic was a barrier to book for antenatal care earlier. Respondents didn’t have time to wait for long hours at the clinic as they had important duties like work or taking care of the family and home took precedence.

Similarly, 73% of the respondents strongly agreed that they mainly ignored signs of pregnancy during early conception or gestational period, and hence they started attending antenatal care late, this was also supported by results of the study conducted in United Kingdom by Haddril et al (2014:207) on understanding delayed access to antenatal care, a qualitative care that concluded that many of the respondents had not known that they were pregnant for weeks or months as they had ignored the signs of pregnancy and thought it was menstrual cycle irregularity and masked the ability to perceive true signs of pregnancy which delayed them accessing antenatal care early.

Of the respondents, 53% indicated that the reason why they attended antenatal care late was because of nurses’ attitude; this was also supported by a study conducted by Pell, Menaca, Were, Afran, Chatio, Manad-Taylor, Hamel, Hodgson, Tagbor, Kalilani, Ouma and Pool (2013:6) on factors affecting antenatal care attendance: results from qualitative studies in Kenya, stated that pregnant women’s interactions with health care staff resulted in delayed antenatal care, women who booked antenatal care in the first trimester were sent home and instructed to return in the second trimester when their pregnancy was visible and could be confirmed by palpation.

Contrary to the above mentioned, 72% of the respondents strongly disagreed that privacy was maintained in the clinics and this was supported by findings by Amnesty International Researchers (2014:33) on struggle for maternal health: Barriers to antenatal care in South
Africa stated that some clinic visited were in unsuitable buildings which lacked privacy, the rooms were small and overcrowded making it impossible to protect confidentiality. Furthermore 54% of the respondents strongly disagreed that the reason for their late booking was because of long distance to the clinic as they were in the walking distance to the clinic. Interestingly, when respondents were asked whether the reason for late clinic attendance as result of whether pregnancy was planned or not, 56% of the respondents strongly indicated that they had unplanned pregnancy that made them present late this results were similar with the results of the study conducted by Tekelab and Berhanu (2014:110) on factors associated with late antenatal initiation of antenatal care among pregnant women attending antenatal clinic at public health centers in Kembata Tembaro Zone Southern Ethiopia, which concluded that 70% of the respondents who booked late for antenatal had unplanned pregnancy compared to 30% which had planned pregnancy and the reasons were that respondents with unplanned pregnancies attempted to deny pregnancy to themselves and to conceal pregnancy to other people resulting in late booking and was also supported by De Vaal (2011:6) on late booking at the Michael Mapongwana antenatal clinic, Khayelitsha-understanding the reasons, also concluded that unplanned pregnancy resulted in late antenatal booking as pregnant woman was still considering abortion.

Unstable operating clinic hours sustained respondent’s late clinic attendance behavior, 15% strongly agreed and 2% agreed. This was also supported by a study conducted in Johannesburg by Solarin and Black (2011:361), concluded that respondents started antenatal care late because they had to make an appointment as the clinic had reached limit for the day and they were not accepting new patients or not conducting antenatal care on that day of the week. The study conducted by Mukesh, Monica, Imchen, Rehman, Yadav and Singh (2015:23) on utilization of health care services in the slums of Lucknow capital of Uttar Pradesh in India concluded that maternal mortality is high despite tremendous efforts and extensive range of services provided through various national health programmes and the health status among slum dwellers is worst and far from adequate due to inadequate availability and accessibility to basic health services. 10% of the respondents sated that they booked late for antenatal care due to fear of HIV testing, supported by the study conducted in North-West province by Nkomo, Davies, Sherman, Bhardwag, Ramokolo, Ngandu, Noveve, Ramraj, Magasana, Singh, Nsiband and Goga (2015:5) on how ready are our health system to implement Prevention of Mother to Child Transmission (PMTCT) option B+? which led to conclusions that reasons
for late booking were fear of HIV testing, poor quality control of HIV counseling and testing that increases the risk of false-positive and negative results within the PMTCT program.

Of the respondents, 43% disagreed that the fear of HIV, forced them to attend antenatal care very late.
Figure 4.1: Percentage distribution of reasons specified for late antenatal care booking

- Signs of pregnancy ignored
- Distance to clinic
- Lack of money
- Nurses' attitude
- Poor infrastructure
- Privacy in the clinic
- Waiting time too long
- Fear of HIV testing
- Unstable clinic operating hours
- Pregnancy planned

Reasons for late antenatal booking

- Agree
- Disagree
- Strongly Agree
- Strongly Disagree
- Undecided
4.6 DISCUSSION OF RESULTS

According to District Health Information System (01 April 2013-31 March 2014) there were one hundred and eighty-nine pregnant women who started antenatal care after 20 weeks of gestation. Despite free antenatal services, pregnant women still start ANC late. The results of this study supported that respondents started ANC late. In this study most respondents (n=99, 77.9%) started antenatal care in the second semester, (n=22, 17.3%) started in the third trimester and (n=6, 4.7%) of the respondents started antenatal care in the first trimester. Pregnant women are recommended to start antenatal care as soon as they suspects pregnancy or even as early as the first missed period (NDoH 2015:34).

4.6.1 Biographical data

There was no association between age and late antenatal booking as most respondents (n=46, 36.2%) attended ANC late and this might have been assumed because this is the age at which respondents were married. Marital status could be associated with late booking as majority of the respondents (n=59, 46.5%) were single. This was supported by a study conducted by Osungdabe and Ayinde (2014:5) on maternal complication prevention: evidence from a cross-control study in southwest Nigeria which stated that 32% of the respondents who booked late for antenatal care were single and lacked partner support.

The highest level of education was identified as determinants of level of knowledge about ANC in pregnant women and in the results of this study (n=16, 12.6%) of the respondents had tertiary education this was supported by results from the study conducted in Uganda by Edward (2011:517) on factors influencing the utilization of antenatal care content, that women who have attained postsecondary education compared with those with less or no education are 0.4 (p<0.05) to 0.5 (p<0.01) likely to attend ANC earlier.

Occupation contributed to late antenatal care booking (n=105, 82.7%) of the respondents were housewives and financially dependent to someone similar results were found in the study conducted in Iran by Hajizadeh, Ramezan, Simbar and Farzadfar (2016:551) on factors influencing the use of prenatal care service. These results concluded that unemployment is one of the barriers against optimal, timely and frequent utilization of
prenatal services, employed women were likely to receive early prenatal care compared to housewives.

In terms of the distance, the majority of respondents (n=59, 46.5%) were at a walking distance but (n=40, 31.5%) used taxis to reach health care facility meanwhile (n=8, 6.3%) had to use two buses or two taxis to the clinic and only (n=11, 8.7%) which resulted in late antenatal booking this was also supported by a study conducted by Ewnetu, Assegid and Wondafrash (2015:2) on factors associated with late antenatal care initiation in an Ethiopian clinic that concluded that longer travelling time and greater distance to health facilities in rural areas constituted the greatest barriers to antenatal care utilization.

4.6.2 Comparison of parameters in late antenatal booking among different age groups

Parity in this study had a significant contribution to late antenatal care booking ($X^2=114.070$ and $p=0.0000$) respondents second or more pregnancies were likely to attend antenatal care. These results were also confirmed by a study conducted in Ethiopia by Yilala (2015:44) on assessment of late initiation of antenatal care and associated factors among antenatal attendees in selected health centers of Addis Ababa which stated that 96.6% of the respondents had pregnancies before. These respondents started antenatal care late due to experience of pregnancy compared to women who had no previous experience of pregnancy as they were more careful with their first pregnancies and therefore started antenatal care earlier. Lack of information on antenatal care contributed to late antenatal booking, the majority of respondents (n=120, 94%) had knowledge about antenatal care and (n=65, 51%) obtained antenatal information from family and friends, those with poor information on antenatal care information could also have misinformed the respondents.

4.6.3 Reasons for late antenatal care booking

On the generalized reasons for late ANC booking, 79% of the respondents indicated waiting time as a barrier that prevented them from seeking care earlier and was supported by the study conducted in Uganda by Kawungezi et al (2015:133) on attendance and utilization of antenatal care (ANC) services stated that most women spend most of their
time caring for children, collecting water or fuel, doing household chores and trade than their own health.

The majority of respondents (73%) agreed that they ignored signs of pregnancy which made them start antenatal care late. Results from the study conducted by Amnesty International Researchers (2014:13) on struggle for maternal health: Barriers to antenatal care in South Africa stated that some of the clinics they visited were in unsuitable buildings which lacked privacy; the rooms were small and overcrowded making it difficult to maintain confidentiality. These results had similarity with the results of this study because 72% of the respondents strongly disagreed that privacy was maintained in the health facilities and contributed to late antenatal care booking and 64% strongly agreed that it was due to poor infrastructure.

Nurse’s attitude is one of the reasons for late antenatal care booking as stated by 53% of the respondents this was supported by a study conducted by Gross, Alba Glass, Schellenberg and Obrist (2012:16) on timing for antenatal care for adolescent and adult pregnant women in South Eastern Tanzania which concluded that poor services and attitude by health workers who did not allow pregnant women to book for antenatal care earlier and turned them back.

The majority of respondents (56%) had unplanned pregnancies supported by the study conducted by De Vaal (2011:6) on late booking at the Michael Mapongwana antenatal clinic, Khayelitsha-understanding the reasons stated abortion as the reasons for late antenatal booking as pregnant women were still considering abortion.

Unstable clinic operating hours contributed to late antenatal care booking in this study. The results were that 15% of the respondents strongly agreed and 2% agree as all clinics offer eight hour services and those working didn’t have an opportunity this was also supported by a study done in Zimbabwe by Mugumbate (2012:34) on late antenatal care booking by pregnant women at Sakubva and Dangamvura polyclinics in Mutare, stated the initial ANC booking were said to be done on Mondays and Thursdays and the other days were for subsequent visits.
4.7 CONCLUSION

Chapter 4 focused on analysis, interpretation and discussion of results of this study. The next and last chapter, Chapter 5, presents the summary, conclusions, limitations and recommendations for early antenatal care booking.
CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 5 presents the purpose of the study, objectives, study methods, overview of the results, conclusion based on study objectives, recommendations, limitations of the study, future research and conclusions.

5.2 THE PURPOSE OF THE STUDY

The purpose of this study was to establish factors contributing to late antenatal booking at Thulamahashe local area so that measures can be put in place to ensure that all women start antenatal care as soon as they miss a period or within 12 weeks of gestation.

5.3 OBJECTIVES

The aims of the study were to

- establish factors contributing to late antenatal booking at Thulamahashe
- use findings to develop strategies and recommendations that will assist and improve early antenatal booking

The research questions were:

- What are the factors that contribute to late antenatal booking at Thulamahashe local area?
- What strategies can be used to encourage early antenatal booking?
5.4 STUDY METHODS

The study was on factors contributing to late antenatal booking at Thulamahashe local area, Bushbuckridge sub-district. The ethical clearance to conduct the study was obtained from the University of South Africa Ethics Committee, Mpumalanga Health Research and Ethics Committee, Bushbuckridge sub-district manager and Thulamahashe local area.

A cohort of 127 pregnant women who initiated antenatal care after 20 weeks of gestation were sampled from four eight-hour clinics and one twenty-four hour community health centre at Thulamahashe local area. A questionnaire was administered to obtain data. The questionnaire was in English and Xitsonga.

5.5 CONCLUSION BASED ON THE RESULTS

The study fulfilled two objectives which were to establish factors contributing to late antenatal care booking and to develop strategies and recommendations that will assist and improve early antenatal care booking.

From the results presented in Chapter 4, the majority of the respondents \((n=70, 55)\) indicated that the best time to start antenatal care was between three and six months. According to Maternal Care Guidelines a woman should visit the health care provider as soon as she suspects pregnancy, even as early as the first missed menstrual period (DOH 2015:34). Therefore 55% of the respondents started antenatal care late as compared to the instructions or rules in Maternal Care Guidelines.

The majority of the respondents \((n=120, 94.4\%)\) had agreed that they had knowledge about antenatal care but the source of information is from family and friends and responses were from \((n=65, 51\%)\) of the population and this may occur that they had been misinformed because a woman who booked late for antenatal care would have advised others to do so. WHO (2016:21) on recommendation of antenatal care for a positive pregnancy experience revealed that pregnant women should be offered health care advice and pregnancy related information by health providers as this will make pregnant women to engage with health services with high confidence.
Most (n=99, 78%) of the respondents ignored the signs of pregnancy similar results were revealed in the study conducted in the United Kingdom by Haddrill et al (2014:5) on understanding delayed access to care: a qualitative interview study that many of the respondents interviewed had not known they were pregnant for weeks or months which had delayed them accessing care, other respondents had experienced pregnancy symptoms but had misinterpreted them due to lack of knowledge or experience.

Pregnant women identified nurses’ attitude as one of the factors preventing them from attending health care facilities (n=74, 58%) the study conducted by Nhemachema (2011:20) on factors influencing the gestational age at booking in primigravida clients within the Prevention of Mother to Child Transmission of HIV at Khayelitsha revealed that health workers attitudes play a great role in determining how a pregnant woman perceives antenatal clinic services and bad attitude forms a barrier to accessing antenatal care, the pregnant woman who experienced bad attitude will share her uncomfortable experience with her peers and community members and pregnant women will delay antenatal booking. Another conducted in Nigeria by Sanda (2014:103) on media awareness and utilisation of antenatal care services by pregnant women in Kano State led to findings that unfriendly attitude by health care workers discourages pregnant women to start antenatal care earlier and also made them lose faith in modern medical services, they resorted to traditional sources whom they believe are more available and more friendly then attending clinics at advanced stages.

Clinic operating hours and long waiting time contributed to late antenatal care booking, (n=19, 15%) of the respondents feel that clinic operating hours was a barrier and the majority of the respondents strongly agreed that it took long to get services at health facilities (n=100, 79%), this was supported by the results of the study conducted by James, Rall and Strumpher (2012) on perception of pregnant teenagers with regard to antenatal care environment which revealed that respondents came early to be first may be before six o’clock and go home after four o’clock as midwives took long tea or lunch breaks whilst keeping pregnant women waiting.

Poor infrastructure was stated by respondents (n=81, 64%) as another factor and this may have contributed to the strongly disagree in the aspect which enquired if privacy was maintained which had (n=92, 72%) the results from a study conducted by Valla (2016:35) on a patient flow system for antenatal primary health care facilities in the Frances Baard
District, Northern Cape Province stated that health facilities were overcrowded, lack of space which compromises health care user’s right to privacy, the quality of infrastructure has a major impact on how services function and influence patient satisfaction with services and pregnant women need space where they can undress and be examined.

Marital status was found to be another reason for late antenatal booking in this study (n=59, 46.5%) of the respondents were single which is similar to a study conducted by Muhwava et al (2014:18) on psychosocial factors associated with early booking and frequency of ANC visits in rural and urban setting in South Africa, revealed that single or never married, divorced or separated pregnant women were less likely to attend ANC compared to married women with husbands to give support.

Distance was another factor contributing to late antenatal booking (n=68, 53.5%) of the respondents used buses, taxis and some of the distance they had to take two taxis or two buses to reach the clinic which increased transport costs, a similar study was conducted in People’s Democratic Republic by Manithip, Edin, Sihavong, Wahlstrom and Wessel (2012:47) on quality and utilization of antenatal care services in rural Lao, which revealed that distance and transport has been shown to affect the decision of the pregnant women to use health care services.

Respondents (n=71, 56%) strongly disagreed that pregnancy was planned which resulted in late attendance of antenatal care as they had to conceal the pregnancy from the family and friends or thought about abortion thus delaying to start antenatal care, this was supported by the study conducted by Shabila, Ahmed and Yasin (2014:18) on women’s views and experiences of antenatal care in Iraq which concluded that women’s perception of antenatal care could be due to having unintended pregnancy that might have resulted in poor utilization of antenatal care services.

This study also demonstrated relationship between parity and late antenatal care booking (n=72, 56, 6%) of the respondents had parity of three and above as they perceive themselves to be of low risk due to experience from previous pregnancy this finding was similar to the study conducted in Ethiopia by Lerebo, Kidanu and Tsadik (2015:171) on magnitude and associated factors of late booking for antenatal care in public health centers of Adigrat town which stated that pregnant women with parity one and above were likely to book late for antenatal care compared to those with zero parity and these
women feel that they don’t need to attend ANC early because they already know what to expect during pregnancy and childbirth and they may also have difficulty of arranging childcare for other children in order to attend antenatal care.

Lack of education and unemployment had also contributed to late antenatal care minority of the respondents (n=16, 12.6%) had attained tertiary qualifications and (n=105, 82.7%) of the respondents were unemployed, poor education led to poor knowledge on importance of antenatal care and, it was supported by a study conducted in Ethiopia by Belayneh, Adefris and Andargie (2014:39) on previous early antenatal service utilisation improves timely booking which concluded that pregnant women who had formal education were likely to attend antenatal care earlier than their uneducated counterparts and they were also financial independent.

5.6 RECOMMENDATIONS

Based on the findings of this study, the researcher made the following recommendations for improving antenatal care booking at Thulamahashe local area:

- Clients visiting clinics for antenatal care should be a priority; they should not wait in the queue.
- Prevention of teenage pregnancy awareness campaign should be conducted at primary and high schools.
- Women should be encouraged to complete schooling before they fall pregnant and the school or college administration should also be encouraged to draw an action plan which will allow married women to participate fully in education either in or out of school or college as better educated women would appreciate the importance of early antenatal booking than the less educated ones.
- Women should be made aware to plan ahead before falling pregnant including how to get to health facility for antenatal care if they need transport.
- Client satisfaction and staff satisfaction survey should be conducted on quarterly basis, results should be analyzed to identify areas for improvement.
- Facilities should conduct self-assessment on National Core Standards and Ideal Clinic Realization so that they can be able to identify gaps, develop quality improvement plan and quality improvement plan progress report quarterly.
Health workers should always maintain privacy when consulting clients.

Nurse’s attitude should be addressed through trainings on interpersonal communication skills.

Other forms of media (television, radio, school curricula in subjects such as Life Orientation) and IEC materials should be used to raise awareness on the importance of early antenatal care.

Community awareness campaigns and health talks in the facility about importance of early booking may change the behaviour of those who are already pregnant to book earlier in the next visit.

Antenatal booking should be done on daily basis and no client should be turned away without getting the service.

The pregnancy tests should be accessible in health facilities to reduce uncertainty amongst women.

The Department of Health should consider changing working hours to accommodate working hours to accommodate working women e.g. the clinics should have call system so that nurses are available in the evening.

Awareness should be raised on the importance of HIV testing especially in pregnancy as it may alleviate the fear that pregnant women have of being tested.

The department should provide mobile clinics to provide ANC services for hard to reach communities; this will help to alleviate the challenge of the increased costs regarding transportation in case of pregnant women.

Men’s forums should be established in the communities to encourage partner involvement in ANC so that they can be able to support their pregnant wives and girlfriends.

5.7 LIMITATIONS OF THE STUDY

Some of the respondents were not sure of their last normal menstrual period which made it difficult to determine whether it was late or early booking.

The study was associated with recall bias where for example they were asked about gestational age in previous pregnancies which they could have forgotten and guessing anytime.
Due to the specific context of the study, the results of this study cannot be generalized in the entire province, or region but are generalized for the Bushbuckridge sub-district.

5.8 FUTURE RESEARCH

- A quantitative study involving interviewing pregnant women in other Bushbuckridge sub-district local areas on the determinants of antenatal care services utilization to provide insight as to why some women book late for antenatal care.
- A repeat study after three years using the same sample to determine any improvements in antenatal care booking.
- Researchers could explore ways in which the challenges faced by women in utilizing ANC can be addressed.
- A study need to be conducted on why antenatal clients do not attend antenatal care in their catchment area but travel to other clinics.

5.9 CONCLUSION

Chapter 5 summarized and discussed the results of the study including the limitations of the study and recommendations. The objective of the study was to explore factors contributing to late antenatal care booking at Thulamahashe local area. The conclusions drawn from this study supported assumptions that there are factors that contribute to late antenatal booking. Most of the reasons given as barriers to antenatal care were ignoring signs of pregnancy, poor infrastructure, lack of privacy in health facilities and long waiting time. Limitations noted were that there are few studies conducted on late antenatal care booking at Thulamahashe local area. Recommendations were made based on the results of the research to improve early antenatal care booking.
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NDoH see National Department of Health.

NHI see National Health Insurance.

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ANNEXURE A: INFORMED CONSENT FORM

Name of project/study: “Factors contributing to delayed antenatal booking at Thulamahashe local area, Bushbuckridge subdistrict, Ehlanzeni district in Mpumalanga province, South Africa.”

This informed consent contains 2 sections; the first is the information part which provides information related to the study and the nature of involvement of prospective participants. The second part is the certificate of consent which should be signed by eligible participants who participates to the study witnessed by the researcher.

PART 1: THE INFORMATION SHEET

Dear Mama

My name is Mkateko Maria Mkhari, student number 33201765 pursuing my Masters of Arts in Nursing with the University Of South Africa (UNISA). The purpose of this letter is to invite you to participate in the above mentioned study. However, for you to accept the invitation, an informed decision, I need to clarify aspects of the study with you:

- You are under no obligation to participate in the study and refusing my invitation will not be held against you in any way.
- The study has been approved by UNISA Higher Degree Ethics Committee.
- Should you agree to participate in the study, you are free to withdraw from the study should you at any stage feel to do so. You are asked to participate in this study for one reason only, and that is because you are pregnant.
- Questions in the questionnaire relate to your pregnancy and you attendance and experience of antenatal services as well as to you personally.
- All information will be kept confidential and your anonymity is secure. The questionnaire does not ask for information that will identify you or link you to the study information.
- During the study and thereafter, only I, my supervisor and the UNISA Higher Degree Ethics Committee will have access to the data collected. As the responses of all respondents are pooled, and not identification is attached to information they will not be able to link you up with any of the findings.
The results will be used to address reproductive needs of pregnant women and strategies to achieve early antenatal booking.

There are no adverse effects for seen in completing the questionnaire.

The results will be used for scientific purposes and may be published anonymously.

The results are expected to improve antenatal booking services

The aims and objectives of the study are:

- To explore factors contributing to late antenatal booking by women at Thulamahashe.
- To use findings to develop strategies and recommendations that will assist and improve early booking.

You may sign the certificate of consent if you accept to participate to the study only if you feel that you have received all the information you need about the study.

If you have queries relating to this study in the future my contact details are as follows:
Mrs Mkateko M. Mkhari
Cellphone 0723087666     Phone 013-773-9907

PART II: CONSENT FORM TO BE SIGNED BY PARTICIPANTS

Name of study: "Causes of late antenatal booking at Thulamahashe local area, Bushbuckridge subdistrict, Ehlanzeni district in Mpumalanga province, South Africa.

I have read the information on the aims and objectives of the proposed study and was given the opportunity to ask questions and given adequate time to rethink the issue. The aims and objectives of the study are sufficiently clear to me. I have not been pressurised to participate in any way.

I understand that participation in this study is voluntarily and that I may withdraw from it any time without supplying reasons. This will not have effects or influence on the treatment that I receive from the facility.
I was provided proof that the study has been approved by the UNISA Ethics Committee and Bushbuckridge subdistrict’s Department of Health. I am fully aware that the results of this study will be used for scientific purposes and may be published. I agree to this, provided my privacy is guaranteed.

I hereby give consent to the study.

Name of participant__________________ Signature of participant__________________

Place ___________________ Date _______________ Witness ___________________

**Statement by the Researcher**

I provided written information regarding the study
I agree to answer any future questions concerning the study
I will adhere to the approved protocol

Name of Researcher __________________ Signature __________________ Date ____________
ANNEXURE B: A LETTER TO THE CLINIC SUPERVISOR ON RESEARCH PROJECT THAT WILL BE CONDUCTED AT THULAMAHASHE LOCAL AREA IN BUSHBUCKRIDGE SUBDISTRICT

P.O. BOX 574
THULAMAHASHE
1365
09 JULY 2015

THE CLINIC SUPERVISOR OF THULAMAHASHE LOCAL AREA
P/BAG X3009
MKHUHLU
1246

Dear Sir/Madam

RESEARCH PROJECT ON CAUSES OF LATE ANTENATAL BOOKING AT THULAMAHASHE LOCAL AREA

My name is Mkateko Maria Mkhari working at Edinburgh clinic as an operational manager. Currently I am a student at University of South Africa (UNISA) pursuing a Master of Arts in Nursing Degree. Every student is required to submit a research dissertation at the end of this programme. My research study will be conducted at Thulamahashe local area in Bushbuckridge subdistrict in Mpumalanga province and is titled “Causes of late antenatal booking at Thulamahashe local area, Bushbuckridge subdistrict, Ehlanzeni district in Mpumalanga province South Africa”.

The study will be conducted in 5 facilities namely, Edinburgh, Rolle, Dingleydale, Arthurstone and Thulamahashe.

I will collect data using questionnaires by visiting facilities and conducting interviews on pregnant women who has started antenatal care after 20 weeks of gestation. To ensure privacy and confidentiality no names or identification numbers will be used to maintain anonymity. The questionnaire will take at least a maximum time of 20 minutes.
If you have queries or any questions concerning the study you can contact me at 072 3087 666

Your consideration will be highly appreciated.

Yours faithfully

Mkateko Maria Mkhari (Mrs)
ANNEXURE C: A LETTER TO MPUMLANGA DEPARTMENT OF HEALTH TO REQUEST AUTHORISATION TO CONDUCT A STUDY AT THULAMAHASHE LOCAL AREA IN BUSHBUCKRIDGE SUBDISTRICT

09 July 2015

From: Mkateko M. Mkhari
      P.O. Box 574
      Thulamahashe
      1365

To: Mpumalanga Department of Health

Dear Sir/Madam

RESEARCH PROJECT ON CAUSES OF LATE ANTENATAL BOOKING AT THULAMAHASHE LOCAL AREA

I Mkateko Maria Mkhari am working at Edinburgh clinic as an operational manager and am currently registered with the University of South Africa (UNISA) pursuing a Master of Arts in Nursing Degree.

The degree entails a complete research project being reported on in the form of master's dissertation. My chosen research topic is “Causes of late antenatal booking at Thulamahashe local area, Bushbuckridge sub-district, Ehlanzeni district in Mpumalanga province South Africa”

The research I shall embark upon is a cross-sectional descriptive quantitative project using a self-designed questionnaire to collect data from pregnant women who has started antenatal care after 20 weeks of gestation at Thulamahashe facilities.

My ethical concerns relating to respondent and the institution involved are clearly explicated in the research proposal and summary proposal submitted to the Ethics and Scientific Committees of the Department of Health Studies at the University of South Africa. A copy of the abbreviated research proposal is attached. High in my ethics priorities are respondent autonomy, anonymity and confidentiality as well as of the institution at which the research will be conducted. Competing the questionnaire will take
about 20 minutes of respondents time without interfering with the operations at any of the institution.

Should you need any further information, kindly contact me on my cell: 072 3087 666
Your consideration will be highly appreciated

Yours faithfully

Mkateko Maria Mkhari (Mrs
ANNEXURE D: INTERVIEW SCHEDULE

Causes of late antenatal booking at Thulamahashe local area, Bushbuckridge sub-district, Ehlanzeni district in Mpumalanga province South Africa.

Facility name...................................................................................................................
Sub district...............................................................................................................................
District.................................................................................................................................
Province...............................................................................................................................
Code.....................................................................................................................................

Date of interview..................................................................................................................

SECTION A: BIOGRAPHIC INFORMATION

1. Age in years

2. Marital status
   Married 1
   Single 2
   Widowed 3
   Divorced 4
   Stable relationship 5
   Separated 6

3. Educational level
   Primary 1
   High school 2
   Tertiary 3
   None 4

4. What is the distance from your home?
   Walking distance 1
   Taxi 2
   Bus 3
   Own car 4
   2 taxis or 2 buses 5
5. What is your occupation?

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil servant</td>
<td>1</td>
</tr>
<tr>
<td>Personal business</td>
<td>2</td>
</tr>
<tr>
<td>Housewife</td>
<td>3</td>
</tr>
</tbody>
</table>

SECTION B: ANTENATAL CARE CLINIC ATTENDANCE

6. Number of previous pregnancies

<table>
<thead>
<tr>
<th>Number of Pregnancies</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5 or other</td>
<td>6</td>
</tr>
</tbody>
</table>

7. Did you have access of any antenatal information before you get pregnant?

- YES 1
- NO 2

8. If yes, where?

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>From friends and family</td>
<td>1</td>
</tr>
<tr>
<td>From the radio</td>
<td>2</td>
</tr>
<tr>
<td>From television</td>
<td>3</td>
</tr>
<tr>
<td>From magazine and newspapers</td>
<td>4</td>
</tr>
<tr>
<td>From community campaigns</td>
<td>5</td>
</tr>
</tbody>
</table>

9. At what stage did you start antenatal care with the previous pregnancies?

<table>
<thead>
<tr>
<th>Stage of Care</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 1-3 months</td>
<td>1</td>
</tr>
<tr>
<td>Between 3-6 months</td>
<td>2</td>
</tr>
<tr>
<td>Between 6-9 months</td>
<td>3</td>
</tr>
<tr>
<td>None (primigravida)</td>
<td>4</td>
</tr>
<tr>
<td>None (unbooked)</td>
<td>5</td>
</tr>
</tbody>
</table>
10. At what stage of pregnancy did you start antenatal care with the current pregnancy?

<table>
<thead>
<tr>
<th>Stage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 1-3 months</td>
<td>1</td>
</tr>
<tr>
<td>Between 3-6 months</td>
<td>2</td>
</tr>
<tr>
<td>Between 6-9 months</td>
<td>3</td>
</tr>
</tbody>
</table>

11. When do you think is the best time to start attending antenatal care?

<table>
<thead>
<tr>
<th>Stage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 1-3 months</td>
<td>1</td>
</tr>
<tr>
<td>Between 3-6 months</td>
<td>2</td>
</tr>
<tr>
<td>Between 6-9 months</td>
<td>3</td>
</tr>
</tbody>
</table>

12. Why should ANC be sought?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>To prevent complications</td>
<td>1</td>
</tr>
<tr>
<td>To get antenatal card to go to hospital for delivery</td>
<td>2</td>
</tr>
<tr>
<td>To confirm pregnancy</td>
<td>3</td>
</tr>
<tr>
<td>To be tested for HIV</td>
<td>4</td>
</tr>
<tr>
<td>To get vitamin tablets</td>
<td>5</td>
</tr>
</tbody>
</table>

13. Why do you think pregnant women should attend antenatal care?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>To get antenatal card to go to hospital for delivery</td>
<td>1</td>
</tr>
<tr>
<td>To monitor foetal growth</td>
<td>2</td>
</tr>
<tr>
<td>To be tested for HIV</td>
<td>3</td>
</tr>
<tr>
<td>To identify and prevent complications</td>
<td>4</td>
</tr>
<tr>
<td>To get vitamin tablets</td>
<td>5</td>
</tr>
<tr>
<td>Other, specify</td>
<td>6</td>
</tr>
</tbody>
</table>
14. Why did you start antenatal care at this time? (You can tick more than 1 option)

- To have an HIV test
- To get antenatal card to go to hospital for delivery
- To confirm pregnancy
- Having problem in this pregnancy
- Encouraged by friends or family
- To check gestational age
- Other, specify

15. What are the benefits of antenatal care early in pregnancy

- For early diagnosis of complications
- For prevention of complications
- To get tested for HIV for initiation of antiretroviral treatment if HIV positive
- To get knowledge on care of pregnancy

16. What are some of the things which made you present late for ANC(you can choose more than 1 answer)

- Were the signs of pregnancy ignored?
- Is it the distance to the clinic?
- Is it lack of money to go to clinic?
- Is it nurses attitude?
- Is it due to poor infrastructure?
- Is privacy in the clinic maintained?
- Is the waiting time to long?
- Is it the fear of HIV testing?
- Do the clinic operating hours contribute?
- Was the pregnancy planned?

17. What can be done to motivate pregnant women to attend antenatal care early?

- Clinic operating 12 hours instead of 8 hours
- Improvement of infrastructure
- Improving of staff attitude
- Community mobilisation
- Health education to clinic attendees
- Availability of IEC materials
SECTION C: ANTENATAL CARE SERVICES

18. What services did you get at your antenatal visit with this pregnancy

<table>
<thead>
<tr>
<th>Service</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV counselling and testing</td>
<td>1</td>
</tr>
<tr>
<td>Physical examination</td>
<td>2</td>
</tr>
<tr>
<td>Vitamin tablets</td>
<td>3</td>
</tr>
<tr>
<td>Screening (urine, weight, BP, HB, RPR etc.)</td>
<td>4</td>
</tr>
<tr>
<td>Other, specify</td>
<td>5</td>
</tr>
</tbody>
</table>

19. What information did you get about this pregnancy?

<table>
<thead>
<tr>
<th>Information</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of complications</td>
<td>1</td>
</tr>
<tr>
<td>Monitoring of foetal kicks</td>
<td>2</td>
</tr>
<tr>
<td>Infant feeding</td>
<td>3</td>
</tr>
<tr>
<td>Birth plan</td>
<td>4</td>
</tr>
<tr>
<td>Family planning</td>
<td>5</td>
</tr>
</tbody>
</table>

20. What community influence could stop you from attending antenatal care?

<table>
<thead>
<tr>
<th>Influence</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misconceptions about antenatal care</td>
<td>1</td>
</tr>
<tr>
<td>Cultural beliefs concerning pregnancy</td>
<td>2</td>
</tr>
<tr>
<td>Values attached to attending antenatal care</td>
<td>3</td>
</tr>
</tbody>
</table>

THANK YOU FOR YOUR PARTICIPATION
ANNEXURE E: CONSENT FORM (XITSONGA)

PAPILA RO KOMBELA MPFUMELELO

Vito ra dyondzo:” Xivangelo xa ku sugwas xikalo xa vuyimana nkarhi wu hundzile e Thulamahashe eka xifundzhantsongo xa Bushbuckridge lexi nga ka xifundzhankulu xa Ehlanzeni eprovhinsini ya Mpumalanga e Afrika Dzonga”. Xikombelo lexi xi ni swiyenge swimbirhi, xo sungula xi hlamusela hita dyondzo na swilaveko eka vavutisiwa. Xa vumbirhi I papilla ro kombela mpfumelelo eka muvutisiwa a seketeriwa hi muvutisi

XIYENGKE 1: PAPILA RA NHLAMUSELO
Eka manana
Hi mina Mkateko Maria Mkhari wa nomboro ya 33201765 ndzi dyondzela Masters of Arts in Nursing na yunivhesiti ya Afrika Dzonga (UNISA). Xikongomelo xa papilla leri iku kombela mpfumelelo wo nghena na nwina eka dyondzo leyi hi ku mi vutisa swivutiso. Mahungu lawa minga ta ma hlamusela ya ta va xihundla. Mita boheka ku hlamula papilla ra swivutiso. Papila leri ari na byona vutitivisi bya nwina, enkarhini wa dyondo leyi hi mina, mupfuni wa mina na UNISA Ethics committee hinga ta vona tinhlamulo ta nwina. Tinhlamulo ta nwina ti ta tirhiswa ku antswiswa vukorhokeri eka mintirho ya vayimana. Dyondzo leyi yi pfumeleriwile hi UNISA Ethical Committee
Tivani leswi: Dyondzo leyi ayi kavanyeti vukorhokeri bya n’wina bya vuyimana
- Mita komberiwa ku nghenelela eka dyondzo leyi hikuva mi tikile
- Mi nghenelela hiku swi tsakela, loko mi nga ha swi tsakeli ma pfumeleriwa ku tshika
- Mbuyelo wa kon wuta tirhiswa hi ndlela ya sayense abyi nga humelerisiwi
Mi ta sayina papilla ra mpfumelelo ntsena loko mi kumile nhlamuselo leyi enetisaka Loko u ri na swivutiso mayelana na dyondzo leyi unga lavisisa, Vuxokoxoko bya mina hi lebyi:
Mrs Mkateko M. Mkhari
Nomboro ya selula foni 0723087666 yale kaya 013-773-9907

XIYENGKE 2: MPFUMELELO WO SAYINIWA HI MUVUTISIWA
Mina ndzi hlayile swilaveko hinkwaswo swa dyondzo leyi na swona ndzi nyikiwile nkarhi wo vutisa swivutiso na nkarhi wo ti hleketa hi mhaka leyi. Xikongomelo xa kona xa twisiseka eka mina. Andzi tlimebeletiwanga ku nghenelela eka dyondzo leyi.

Vito……………………………………………………………………
Nsayino………………………………………………………………
Nhawo……………………………………………………………… Siku………………………………………………………….
Mbhoni………………………………………………………………

**XITATIMENDHE XA MUVUTISI**

Ndzi nyikile nhlamuselo mayelana ni dyondzo leyi.
Ndza pfumela ku van a vuthlamuleri mayelana ni dyondzo leyi
Ndzi ta landzelela ntwanano wa mpfumelelo

Vito ra muvutisi……………………………………………… Nsayino……………………………………………………
Siku…………………………………………………………
ANNEXURE F: CONFIDENTIALITY BINDING FORM

Research project: Causes of late antenatal booking at Thulamahashe local area, Bushbuckridge sub district Ehlanzeni district in Mpumalanga province in South Africa.

Agreement between .............................................the researcher 
and.................................................................the participant

I Mkateko M. Mkhari a student at university of South Africa pursing Masters of Arts in Nursing will like to enter into discussion relating to the causes of late antenatal booking at Thulamahashe local area Bushbuckridge sub district Ehlanzeni district in Mpumalanga province in South Africa.

During the discussion the disclosure of confidential information may be necessary. To ensure that the disclosed information is treated in confidentiality it is here agreed as follows:

- Information may be used for authorised purposes only
- Information disclosed hereunder will at all times remain the property of the researcher
- The researcher shall not disclose information to any other party than UNISA Ethics Committee
- The researcher shall not make commercial use of information during such time that it remains confidential
- The researcher agrees to take steps reasonably necessary to protect the secrecy of the confidential information and to prevent it from falling into public domain or into possession of unauthorised person.

This confidentiality binding information constitutes the entire agreement between the researcher and the participant.

The researcher the participant

Name......................................................

Sign....................................................

Date..................................................

Name......................................................

Sign....................................................

Date..................................................
ANNEXURE G: QUESTIONNAIRE (XITSONGA)

SWIVUTISO SWA N’WANGULANO

Xivangelo xo sungula xikalo xa vuyimana nkarhi wu hundzile endzhawini ya Thulamahashe eka
xifundzhantsongo xa Bushbuckridge exifundzheni xa Ehlanzeni ephirovhinsini ya
Mpumalanga.
Vito ra kliniki          ………………………………………………………………………
Xifundzhantsongo     ………………………………………………………………………
Xifundzha                     ………………………………………………………………………
Phurovhinsi                 ………………………………………………………………………
Khodi                             ………………………………………………………………………
Siku ra n’wangulano                     ………………………………………………………………………

XIYENGE XA A: MATIMU YA WENA
1. U ni malembe mangani?

2. Xiyimo xa vukati

| U tekiwile | 1 |
| A wu tekiwanga | 2 |
| U feriwile | 3 |
| U tshikiwile | 4 |
| Mi hambanile | 5 |
| Mo va vanghana | 6 |

3. Tidyondzo

| Xikolo xa le hansi | 1 |
| Xikolo xa le henhla | 2 |
| U dyondzele ntirho | 3 |
| A wu dyondzanga | 4 |

4. Mpfhuka wa le kliniki

| U famba hi milenge | 1 |
| U.khandziya.bazi | 2 |
| U khandziya thekisi | 3 |
| U na movha | 4 |
| U khandziya kambirhi | 5 |

5. Ntirho wa wena

| U mutirhela mfumo | 1 |
| U n’wamabindzu | 2 |
A wu tirhi

XIYENGE XA B: XIKALO XA VUYIMANA

6. Nhlayo ya makhwiri lama nga hundza

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<thead>
<tr>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5 kumbe ku tlula</td>
<td></td>
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</tbody>
</table>

7. U tshame ukuma mahungu ya xikalo unga se tika?

ina 1 kumbe ee 2

8. Loko ku ri ina u ma kume kwihi?

Ka vanghana na vandyangu
Ka xiyanimoyo
Ka thelevhixini
Eka maphepha- hungu
Eka swinavetiso swa le tikweni

9. U sungule xikalo u ri na tinhweti tingani eka makhwiri la ma nga hundza?

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<tr>
<td>Xikarhi ka 1 ku fika 3 ya tinhweti</td>
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<tr>
<td>Xikarhi ka 3 ku fika 6 ya tinhweti</td>
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<tr>
<td>Xikarhi ka 6 na 9 ya tinhweti</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A wu nga sungulanga</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wo sungula ku tika</td>
<td></td>
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10. Eka lera sweswi u sungule hi tinhweti tingani?

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<tr>
<td>Xikarhi ka 3 ku fika 6 ya tinhweti</td>
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<tr>
<td>Xikarhi ka 6 ku fika 9 ya tinhweti</td>
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11. Xana hi wihi nkarhi wa kahle wo sungula xikalo xa khwiri?

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</thead>
<tbody>
<tr>
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<td></td>
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<tr>
<td>Xikarhi ka 3 na 6 ya tinhweti</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Xikarhi ka 6 ku fika 9 ya tinhweti</td>
<td></td>
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</tbody>
</table>

12. Hikwalaho ka yini?
13. Xana hi wihi nkoka wo sungula xikalo xa vuyimana?

| ku kuma khadi ro ya xibedlhele | 1 |
| ku vona ku kulaka nwana | 2 |
| ku sivela switandzhaku | 3 |
| ku kuma mapilisi ya tivhitamini | 4 |

14. Hikwalaho ka yini u sungule xikalo xa vuyimana sweswi?

| ku kamberisa HIV | 1 |
| ku kuma khadi ro ya bebulela exibedlhele | 2 |
| ku tiyisisa khwiri | 3 |
| kuva na swiphiqo hi khwiri leri | 4 |
| u hlohlotele hi vanghana na vandyangu | 5 |
| ku kambela xiyimo xa khwiri | 6 |
| swin’wana hlamusela | 7 |

15. Hi wihi nkoka wo sungula xikalo ka ha ri na nkarhi

| ku sivela switandzhaku | 1 |
| ku hatla ku voniwa switandzhaku | 2 |
| ku kamberisa HIV | 3 |
| ku sungula maphilisi yo titivata HIV | 4 |
| ku kuma vutivi mayelana na vuyimana | 5 |

16. Hi swihi leswi sivelaka vayimana ku hatla vasungula xikalo?

| ku ka vanga ri na mhaka na swona | hiswona | 1 | 2 | 3 | 4 | 5 |
| mpfhuuka wo ya kliniki | hiswona | 1 | 2 | 3 | 4 | 5 |
| ku kala mali yo khandziya | hiswona | 1 | 2 | 3 | 4 | 5 |
| matikhomele ya vaongori | hiswona | 1 | 2 | 3 | 4 | 5 |
| muako wa kliniki awu tshamisekanga | hiswona | 1 | 2 | 3 | 4 | 5 |
| ku chava ku kamberiwa HIV | hiswona | 1 | 2 | 3 | 4 | 5 |
| ku heta nkarhi wo leha kliniki | hiswona | 1 | 2 | 3 | 4 | 5 |
| switirhisiwa I swintsongo | hiswona | 1 | 2 | 3 | 4 | 5 |
| nkarhi wa matirhele ya kliniki | hiswona | 1 | 2 | 3 | 4 | 5 |
| a wu nga tiyimiselanga ku tika | hiswona | 1 | 2 | 3 | 4 | 5 |
17. Hi swihi swi nga hlohlotelaka vavasati ku hatla vas ungula xikalo?

Kiliniki yi tirha 12 wa tiawara ku ngari 8
Ku antswisa muako
Ku antswisa matikhomele ya vaongori
Ku hloholotela vaaki
Tidyondzo eka lava taka etiliniki
Ku kumeka swipapilana swa tidyondzo

18. U kume vukorhokeri muni exikalwini?
U kamberiwile HIV
U kamberiwe mirhi hinkwawo
U nyikwiwile maphilisi ya tivhitamini
U kamberiwe BP, xikalo, mitsakamiso na mpimo wa ngati
Ku kambela swinwana hlamusela

19. U kume tidyondzo muni?
Ku sivela switandzhaku
Ku kambela ku tlanga ka n’wana
Ma mamiselo
KU kunguhata
Makungu yo bebula

20. Hi swihi etikweni swi nga ku sivelaka ku ya exikalwini xa vuyimana?

Ndzhavuko mayelana na vuyimana
Ku ka vanga twisisi mayelana na swaxikalo
Mitolovelolo eyi katsiwaka na xikalo xa vuyimana

INKOMU!
UNIVERSITY OF SOUTH AFRICA
Health Studies Higher Degrees Committee
College of Human Sciences
ETHICAL CLEARANCE CERTIFICATE

REC-D12714-039
HSHDC/450/2015

Date: 25 November 2015
Student No: 3320 178-5

Project Title: Factors contributing to late antenatal booking in selected clinics.
Researcher: Mlatselo Maria Mkhazi
Degree: MA in Nursing Science
Code: MPCH594
Supervisor: Dr JM Mathibe Noko
Qualification: PhD
Joint Supervisor: -

DECISION OF COMMITTEE
Approved [ ]
Conditionally Approved [ ]

[Signature]
Prof L Roets
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE

[Signature]
Prof MM Muleki
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRIES
ANNEXURE I: PERMISSION FROM MPUMALANGA DEPARTMENT OF HEALTH

04 April 2016

Mikateko Mkhari
103 Than van Wyk building
Pretoria, 0003

Dear M Mkhari

APPLICATION FOR RESEARCH & ETHICS APPROVAL: FACTORS CONTRIBUTING TO LATE ANTENATAL BOOKING AT THULAMHASHE LOCAL AREA.

The Provincial Health Research and Ethics Committee has approved your research proposal in the latest format that you sent.

PHREC REF: MP_2016RP13_341

Kindly ensure that you provide us with the soft and hard copies of the report once your research project has been completed.

Kind regards

MR. JERRY SIGUDLA
MPUMALANGA PHRC
TO: MS C MASINGCA
ACTING DEPUTY DIRECTOR
BUSHBUCK RIDGE SUB-DISTRICT

SUBJECT: APPROVAL FOR RESEARCH PROJECT ON ANTI-NATAL BOOKING AT THULAMALASHI LOCAL AREA

This letter seeks to request approval for Operational Manager Vukateko Maria Malari to do a research project at Thulamalashi local area and Bushbuckridge subdistrict Mpumalanga.

The applicant is a part-time student at University of South Africa (UNISA), who will be pursuing her Master of Arts in nursing degree. The study will be conducted in 85 facilities namely Edithburg, Rolle, Dingcayla, Arthur’s town and Thulamalashi. The research will be based on cause of late antenatal booking at Thulamalashi local area.

V. I. KHOZA
SR HRD PERSONNEL OFFICER
BBR SUB DISTRICT

APPROVED

MS C MASINGCA
ACTING DEPUTY DIRECTOR
BUSHBUCK RIDGE SUB-DISTRICT