FACTORS ASSOCIATED WITH ANTENATAL CLINIC BOOKING: APPLICATION OF THE ECOLOGICAL MODEL FOR HEALTH PROMOTION IN MPWAPWA, DODOMA – TANZANIA.

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MSc (Midwifery and Women's Health) Dissertation
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By

Bahati Simon Katembo

A dissertation Submitted in (partial) Fulfillment of the Requirements for the Degree of Master of Science in Midwifery and Women's Health of Muhimbili University of Health and Allied Sciences.

November, 2017

CERTIFICATION

The undersigned certify that she has read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled *"**Factors associated with antenatal clinic booking: Application of Ecological model for health promotion in Mpwapwa, Dodoma – Tanzania***" in (partial) fulfillment of the requirement for the degree of Master of Science (Midwifery and Women's Health) of Muhimbili University of Health and Allied Sciences.

……..

Dr. Edith A. M Tarimo (PhD, RN)

(Supervisor)

Date:……

DECLARATION AND COPYRIGHT

I, **Bahati Simon Katembo** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature …….. Date: ……..

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DEDICATION

This research is dedicated to my wonderful wife, Isdora Gallus Kayombo and my terrific kids Johnson and Joan who persevered my absence and late home coming so as to accomplish my Masters Degree Studies.

ABSTRACT

Background: Antenatal clinic (ANC) is a clinic where a pregnant woman receives services during pregnancy through a series of consultations with trained health care workers such as midwives, nurses or doctors who specialize in pregnancy and birth. The ANC services are usually grouped into booking and follow-up visits. The booking visit offers the midwife/clinician the opportunity to assess the health status of the expectant mother and unborn baby. Mothers who miss antenatal clinic booking may also miss important services such as management of obstetric complications including pre-eclampsia, tetanus toxoid and identification and management of infections including human immune virus (HIV), syphilis and other sexually transmitted infections (STIs).

Objective: This study describes factors associated with antenatal clinic booking among pregnant women in Mpwapwa using the ecological model for health promotion.

Methodology: A cross sectional study design using a quantitative approach was employed. The study was conducted at Mpwapwa reproductive and child health (RCH) clinic which is located in Mpwapwa District Council in the Dodoma Region, Tanzania. The study population was all pregnant women attending at Mpwapwa RCH clinic during the study. A sample size of 352 participants was recruited for the study. A semi structured questionnaire consisting of open ended and closed ended questions was used to collect information about the ANC booking among pregnant women attending at Mpwapwa RCH clinic. The data were entered and analyzed using software Statistical Package for Social Sciences (SPSS) version 21 where by chi square test was used to determine the associations between late booking and independent variables.

Results: A total of 352 respondents participated in the study. Majority of respondents (69.9%) registered at ANC after three months of pregnancy. This is due to the fact that most of the respondents were living in a distance of more than five kilometers to reach ANC and also majority of them were using foot as means of transport. About 227 (64.5%) of pregnant women knew that the first trimester is the best time to start ANC and 229 (65.1%) of pregnant women illustrated that required number of ANC attendance throughout the pregnancy is four times. This high knowledge of knowing best time to

start ANC and required number of attending at ANC is due to the fact that most of respondents had formal education. About 231(65.6%) of respondents illustrated that it was necessary to get permission from their partner before they started ANC, and about 301 (85.5%) of respondents said that they were getting financial support from their partners. The findings of the study indicated that, the problems of depending on financial support and permission from their partners facilitated them to attend ANC late. Moreover, 140 (39.8%) of respondents reported that, they were waiting for more than an hour to get ANC services. This long waiting time was due to inadequate staffs which was observed during data collection; only one trained nurse was allocated to provide services from 40 to 50 pregnant women per day. Moreover 352 (100%) of respondents reported that they were not paying for ANC booking or clinic card. This indicated that the national exemption policy for pregnant women was adhered to.

Conclusion: In conclusion, the overall proportion of late booking was high. Some of the reasons for late booking could be long walking distance to ANC, subordination of pregnant women on decision making concerning ANC booking, and dependence on partner for financial issues.

Recommendation: It is important to provide community based information, education and communication on antenatal care. In addition, emphasis on the best time to start ANC is mandatory at all levels of health facilities.

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LIST OF ABBREVIATIONS

AIDS……Acquired Immune Deficiency Syndrome

ANC ……...Antenatal Clinic

DED…….District Executive Director

DMO……District Medical Officer

GA ……..Gestation Age

HIV……..Human Immune Virus

MUHAS ……..Muhimbili University of Health and Allied Sciences

PI ……Principle Investigator

RA ……Research Assistant

RCH …….....Reproductive and child health

SP …….....Sulfadoxine pyrimethamine

SPSS …….Statistical Package for Social Sciences

STIs……Sexual Transmitted Infections

TT……...Tetanus Toxoid Vaccine

WHO …….....World Health Organization

DEFINITION OF TERMS

Conceptual definitions

Antenatal clinic is a clinic where a woman receives services during pregnancy through a series of consultations with trained health care workers such as midwives, nurses or doctor who specialized in pregnancy and birth (Fagbamigbe & Idemudia, 2015)

Attitude is the person's affective feelings of like or dislike (Ojong et al., 2015)

Early ANC booking: is booking to antenatal clinic within the first 12 weeks of pregnancy (De Vaal, 2015).

Knowledge is information, understanding and skills that one gains through education or experience (Ojong et al., 215).

Late ANC booking is defined as booking at ANC after 12 weeks of gestation (Vaal, 2011).

Pregnancy is the state or condition of being pregnant (Collins English Dictionary, 2014)

Operational definitions

Attitude refers to expectant mothers' affective feelings of likes and dislikes to antenatal clinic booking.

Knowledge refers to the act of having adequate, information and understanding of the concept of antenatal clinic booking

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

Antenatal clinic (ANC) is a clinic that a woman attends during pregnancy through a series of consultations with trained health care workers such as midwives, nurses or doctor who have specialized in pregnancy and birth (Fagbamigbe & Idemudia, 2015). The purpose of this specialized form of clinic is to assure that every pregnancy ends in the birth of a healthy baby with no impairment in the mother's health (Nisar, & White, 2003).

The ANC attendance is usually grouped into booking and follow-up visits. The booking visit offers the midwife/clinician the opportunity to assess the health status of the expectant mother and unborn baby. Early detection of disorders that predate the pregnancy or could be aggravated by the pregnancy is crucial to preventive, therapeutic, and counseling services (Hoque et al., 2008). Fetal assessment, gestational age estimation, blood screening for human immune virus (HIV) infections, blood screening for hemoglobin level, blood sugar level, rapid syphilis test, blood type and rhesus status, urine test for protein, blood pressure examination, maternal weight and height are usually carried out in the booking visit. This also allows expectant mothers to assess the services available in the health care facility and help her decide whether or not to utilize those services (Villar et al., 2001).

Several reports document the first 12 weeks of pregnancy as the generally recommended period for the booking visit (Andrew et al., 2014). The antenatal clinic services policy in Tanzania follows the latest WHO approach to promote safe pregnancies, recommending at least four ANC visits for women without complications and more than 4 visits for women with complicated pregnancy. Many health care centers are transitioned from the traditional approach to this focused antenatal clinic approach. The new schedule of visits is as follows: The first visit should occur within 12 weeks of pregnancy; the second visit

should be between 24 and 26 weeks of pregnancy; the third visit is at 32 weeks; and the fourth at 36 - 38 weeks of pregnancy (Villar et al., 2001; Andrew et al., 2014).

ANC visits have benefit for proper pregnancy information sharing, pregnancy monitoring, early detection and treatment of complications of pregnancy and ensures proper management at delivery and post-delivery (Phafoli et al., 2007). Some of the preventive services are iron supplements, blood pressure measurement, urine test for protein, sulfadoxine pyrimethamine (SP) for prophylaxis of malaria and also information on signs of pregnancy complication (Misgna et al., 2016). Throughout the antenatal clinic follow up, efforts have been made to recognize pregnant mothers not at risk and those at risk group based on their earlier pregnancy or at present historical or medical factors and steps are planned to avoid it in this supposedly high- risk group of mothers to decrease adverse pregnancy outcomes (Lilungulu and Matovelo, 2016).

This study is designed to assess factors associated with ANC booking at Mpwapwa using the ecological model for health promotion (McLeroy and colleague., 1988). The ecological model for health promotion focuses on both populations level and individual level determinants of health and interventions. It considers issues that are community-based and not just individually focused. Health is determined by influences at multiple levels (eg intrapersonal, interpersonal, institutional, community and public policy factors). Ecological model for health promotion identifies environmental factors and influences, which interact and affect individual behavior. These factors may be the physical setting or place, the human aggregate or characteristics of the people, organizational and social climate, or characteristics of the surrounding community. Because significant and dynamic interrelationships exist among these different levels of health determinants, interventions are most likely to be effective when they address determinants at all levels.

The ecological model for health promotion factors which are associated with ANC booking have been grouped into intrapersonal factors (knowledge, attitudes, behavior, self concept, skill, developmental history); interpersonal factors (formal and informal social network and social support systems, including family, work groups and friendship

networks); institutional (social institutions and organization characteristics and formal and informal) rules and regulations for operations; community factors (relationships among organization, institutions and informal networks with defined boundaries); and public policy factors (local, state and national laws and policies).

The factors which are going to be assessed at intrapersonal level are knowledge and attitude; at interpersonal level are partner, family and customs or traditions; at institutional level are religion and cultural believes, health facility rules and regulations; at community level is transportations and at public policy level is local policies.

Studies have documented that interpersonal and other factors do influence antenatal clinic (ANC) booking either positively or negatively (Fagbamigbe & Idemudia, 2015; Fantanesh, 2015; Onasoga et al., 2012). Partners, customs or traditions, family members of pregnant women, distance to antenatal clinic, availability of transport, health facility rules and regulations, local policies, knowledge and attitudes have been reported to influence antenatal clinic booking (Gross et al., 2012; Kisuule et al., 2013; Ojong et al., 2015; Onasoga et al., 2012).

This model will help the researcher to identify factors which are associated with antenatal clinic booking among pregnant women at Mpwapwa.

1.2 Problem Statement

To achieve the full life-saving potential that ANC promises for pregnant mothers, four visits are mandatory. This is not the case in Mpwapwa District where there is poor tendency for pregnant women to attend early in ANC. Poor utilization of ANC has been associated with increase in morbidity and mortality of both pregnant mothers and newborns at the district due to the fact that these women miss essential interventions in ANC including identification and management of obstetric complications and infections. They also miss opportunity to promote the use of skilled personnel at birth and healthy behaviors such as breastfeeding, early postnatal care, and planning for optimal pregnancy spacing (Lincetto et al., 2006). The knowledge and attitudes have been reported to influence negatively ANC booking with 59% and 55.3% respectively (Fantanesh, 2015) and 17% of poor accessibility due to distance, difficult to cross rivers and poor road conditions have been also reported to influence ANC booking (Gross et al., 2012).

Despite the facts that the ANC services are free and highly accessible in Tanzania, most of pregnant women at Mpwapwa don't use ANC effectively. Data from Mpwapwa District Health Information System has shown that 87% of pregnant women made their ANC booking after three months of pregnancy. 10% of all pregnant women do not use the ANC services at all until delivery (DHIS, 2016). The reasons for poor ANC booking at Mpwapwa district are not well known since there is no published study to reveal factors associated with ANC booking in Mpwapwa.

Thus, the researcher aimed to assess factors associated with ANC booking among pregnant women attending Mpwapwa RCH clinic using the ecological model for health promotion.

1.3 Significance of the Study

The findings of this study will help Mpwapwa district council and other stakeholders in designing intervention at strategies and developing policies which will promote early ANC booking. Also the study will be used as a baseline for researchers since limited studies have been conducted in the district. In addition, the results of this study are

useful in the provision of an evidence of the gaps found in the area for relevant stakeholders, therefore improve quality of maternal care services.

1.4 Conceptual Model

The study used conceptual model from Mc Leroy and colleagues (1988) which explains the five factors of influence for health related behaviors and conditions. The factors are intrapersonal factors which are knowledge, attitudes, behaviors, self-concept, skill, developmental and history; Interpersonal processes and primary groups which comprises formal and informal social network and social support systems including family, work group and friendship networks; The institutional factors includes social institutions and organization characteristics, and formal (and informal) rules and regulations for operations; Community which comprises of institutional, community, and public factors and public policy which includes local, state and national laws and policies.

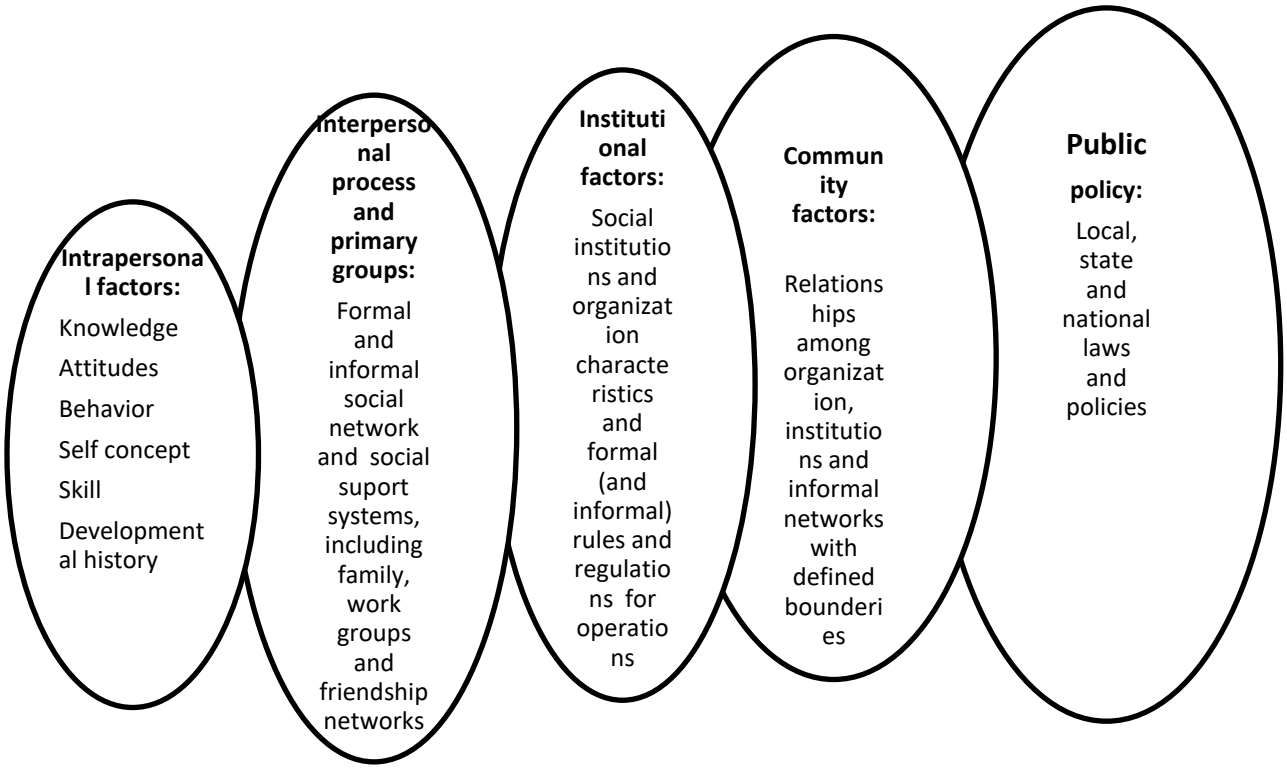


Figure 1: Original ecological model for health promotion (McLeroy and colleagues (1988)

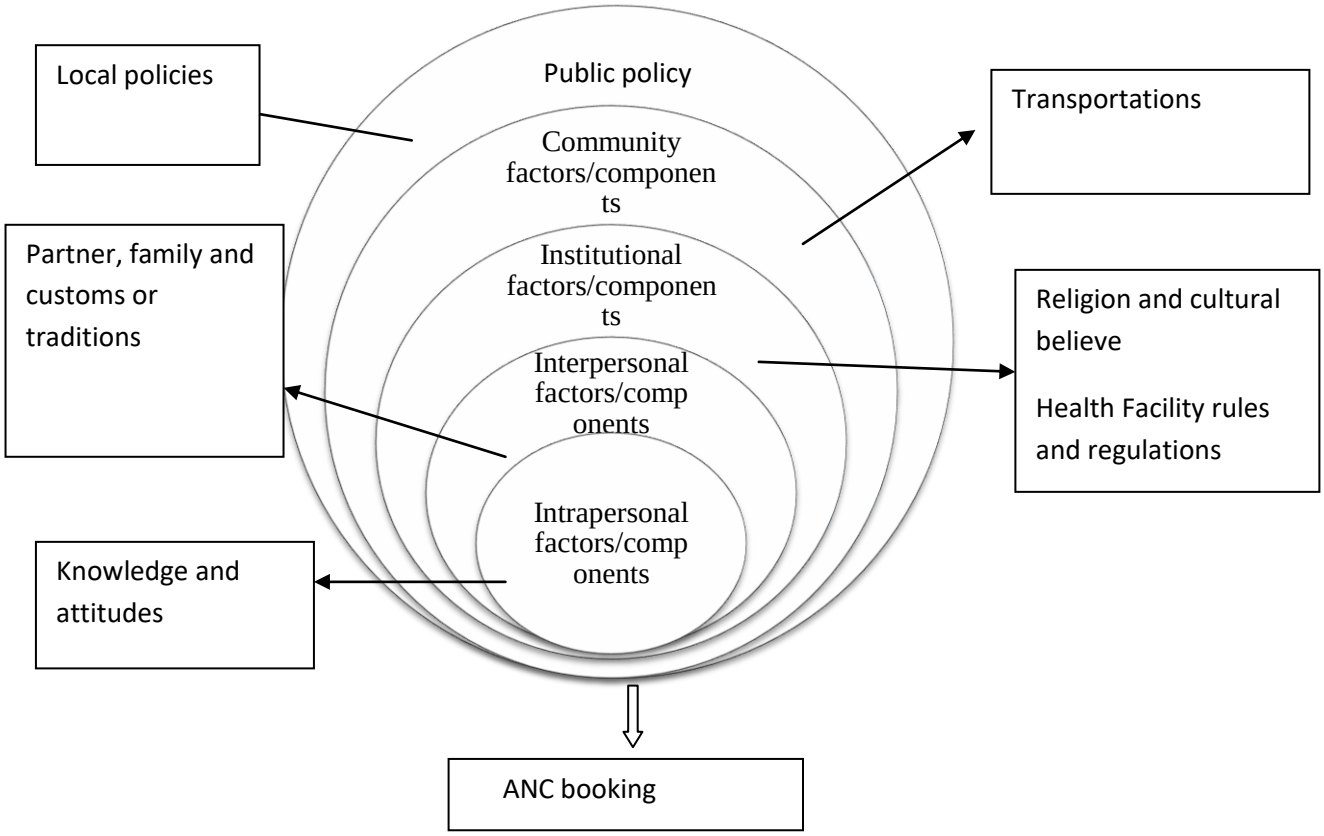
The ecological model for health promotion is a framework for understanding the key factors that contribute to certain problems/risks. The model underscores the fact that in order to develop strategies for reducing and/or eliminating problem through broad-based prevention programming, it is critical to develop an understanding of the complex interplay of biological, psychological, social, cultural, economic and political factors.

The application of ecological models for health promotion focus on explaining the person-environment interaction, improving people-environment transactions, nurturing human growth and development in particular environments, and improving environments so they support expression of individual's system's dispositions (Mc Leroy and colleagues 1988).

1.5 Modified ecological model for health promotion.

The factors associated with antenatal clinic booking can also be addressed by using modified ecological model for health promotion. The original model has been modified to match the needs of the current study. In this modified ecological model included intrapersonal, interpersonal, institutional community and Public policy factors. The intrapersonal factors which will be looked at in this study are knowledge and attitudes; Interpersonal factors are partner, family and customs or traditions; Institutional factors which will be assessed are religion and cultural believes and health facility rules; regulations and on community factors which will be assessed are transportations and on public policy will be assessed local policies. A concept of this model has been used in literature search, formulating research questions, objectives as well as formulating questionnaire.

Figure 2: Modified ecological model for health promotion



1.6 Research questions

1. What is the proportion of ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma?
2. What are the influences of intrapersonal factors in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma?
3. What are the influences of interpersonal factors in ANC booking among pregnant mothers in Mpwapwa RCH clinic, Dodoma?
4. What are the influences of institutional factors in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma?

5. What are the influences of community factors in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma?
6. What are the influences of public policy factors in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma?

1.7 Objectives

1.7.1 Broad objective

This study describes factors associated with antenatal clinic (ANC) booking among pregnant women in Mpwapwa RCH clinic, using the ecological model for health promotion.

1.7.2 Specific objectives

1. To determine the proportion of ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma.
2. To determine the influence of intrapersonal factors (Knowledge, and attitudes) in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma.
3. To assess the influence of interpersonal factors (Partner, family and customs or traditions) in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma.
4. To determine the influence of institutional factors (religion and cultural believe, health Facility rules and regulations) in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma.
5. To assess the influence of community factors (transportations) in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma.
6. To assess the influence of public policy factors (local policies) in ANC booking among pregnant women in Mpwapwa RCH clinic, Dodoma.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

The literature review is guided by the ecological model for health promotion through intrapersonal factors, interpersonal factors, community factors organizational factors as well as Public policy factors.

2.2 Intrapersonal factors

There are several intrapersonal factors associated with antenatal clinic booking among pregnant women such as knowledge and attitude (Henok et al., 2015).

A study done in Nigeria discovered that antenatal clinic booking was influenced by knowledge. The study revealed that most of the respondents involved in the study had knowledge toward antenatal clinic booking. The respondents knew that antenatal clinic involves four visits for uncomplicated pregnancy and more than four visits for complicated pregnancy and also they knew that antenatal clinic attendance is for health promotion and disease prevention (Ojong et al., 2015). Contrary to this result, a study done in Uganda found that most of the respondents 291 (72.7%) had low knowledge which was negatively associated with antenatal clinic booking since they did not know the best time to initiate antenatal clinic (Kisuule et al., 2013). Another study done in South West Ethiopia revealed that, majority of pregnant women were knowledgeable on importance of antenatal clinic and were in position to initiate antenatal clinic timely than those few who had no knowledge about antenatal clinic (Henok et al., 2015). Contrary to these results, a study done in Ethiopia revealed that 240 (59%) of interviewed pregnant women had poor knowledge on ANC and they did not know danger signs during pregnancy (Fantanesh, 2015). However the study done in South Sudan demonstrated that about 3018 (90%) of respondents were illiterate and had low knowledge on ANC which made them having less ability to initiate antenatal clinic timely and very few respondents who were literate booked ANC timely (Mugo et al., 2015).

Another study conducted in Nigeria illustrated that most of respondents 92 (90.2%) had no knowledge on importance of antenatal clinic booking (Onasoga et al., 2012). On top of that, the study done in Papua New Guinea documented that knowledge of antenatal clinic had an important influence on antenatal clinic booking. This study showed that respondents who had low knowledge did not know the importance of antenatal clinic booking; they thought attending antenatal clinic is just for diagnosing and treating sickness and not for prevention. So they came with decision that they will attend antenatal clinic only when they felt sick (Andrew et al., 2014).

Moreover, the study done in North West Ethiopia documented that knowledge was also a factor which associated with antenatal clinic booking. Knowledge is important to women's quality of life since everything which is done depends on knowledge. Knowledge is the summation of conceptions, views and propositions which have been established and tested. Pregnant women who had good knowledge on importance of antenatal clinic booked timely and adhered on subsequent visits for their own health benefits and unborn baby or babies (Gudayu et al., 2014).

Apart from that, level of education has significant influence on the attitude of pregnant women to antenatal clinic booking. Pregnant woman with basic education usually manifest positive attitude. Asseffa et al., (2016) stated that 167 (22.2%) of respondents had no formal education and most of them had negative attitude towards antenatal clinic booking while 181 (78.8%) of respondents who had formal education of secondary and above secondary level had positive attitude towards antenatal clinic booking. In addition a study done in Nigeria showed that most of the pregnant women 127 (69%) involved in the study liked to initiate antenatal clinic because at clinic they were relieved from anxiety, got individualized care and also they were counseled on their health (Ojong et al., 2015).

2.3 Interpersonal factors

Kisuule et al., (2013) reported that pregnant women's family members influence antenatal clinic negatively. They undervalued the importance of ANC booking and made barriers to pregnant woman not attending at antenatal clinic. By doing so, the pregnant

woman did miss the opportunity of early detection of HIV/AIDS and STIs, malaria and anemia prophylaxis, health education and treatment or prevention of complications. On other hand, family members may influence antenatal clinic positively. Contrary to a study done by Andrew et al., 2014; Onasoga et al., 2012, demonstrated that parents or in-laws were supporting pregnant women by taking care of other children, cooking foods in her absent and doing other daily activities. Partners were providing money, encouraging and accompanying their wives to antenatal clinic. Another factor which was significantly associated with antenatal clinic was decision making. A study conducted in Pakistan demonstrated that some pregnant women failed to attend timely at antenatal clinic due to late permission from their partner and significant others in the family while others initiated antenatal clinic timely because they had made their own decision on antenatal clinic initiation (Nisar, & White, 2003). However, the study conducted in Zimbabwe pointed out that, the majority of pregnant women whose decision of starting antenatal clinic was made by significant others such as mothers, mother in-laws and partner experienced ANC booking after twelve weeks of pregnancy and sometimes were not attending at all whereas few of pregnant women who made decisions of starting ANC themselves experienced ANC booking within twelve weeks of pregnancy (Musendo et al., 2016). Gudayu et al., 2014 in their study indicated that decision making is also a factor which influenced antenatal clinic booking. The study showed that pregnant women who had power in decision making on initiation of antenatal clinic, booked timely and they benefited from basic antenatal services and they ended up with good result. Another researcher in Uganda discovered that when there is joint power of decision (both pregnant woman and partner) on antenatal clinic booking the association become positive but if decision making toward antenatal clinic booking is done by mothers, aunts or in-laws, the association become negative (Kisuule et al., 2013).

Moreover the qualitative study done in South Africa demonstrated that some pregnant women were negatively affected by their partners toward antenatal clinic booking due to lack of support and others illustrated that they feared negative reaction from their parents especially when they conceived out of marriage (De Vaal, 2011).

2.4 Community factors

A previous study demonstrated that antenatal clinic booking was negatively affected by poor means of transport (Hoque et al., 2008). Moreover the study conducted by Asseffa et al (2016) in Southern Ethiopia, noted that majority (99.2%) of the respondents reported that foot was a predominant means of transportation to antenatal clinic while others were cart, tricycle/bajaji and public transportation. So due to the fact that most of respondents used foot as means of transport, they were tired and were not booking timely. Moreover the study conducted in Peri-urban district, Zimbabwe found that majority 68 (79.1%) walk < 15 kilometers to health facility and 18 (20.9%) walk > 15 kilometers to health facility. So this long distance of walking to health facility was one of reasons for them to initiate antenatal clinic after twelve weeks of pregnancy (Musendo et al., 2016). Nisar, & White, (2003); Matyukira, (2014), illustrated that transport cost, long distance to antenatal clinic and unavailability of transport was among the factors which were negatively associated with antenatal clinic booking. Moreover, cost of transport and long distance to antenatal clinic also had been identified as the factors associated with antenatal clinic booking. Andrew et al., (2014); Fagbamigbe and Idemudia, (2015), reported that some pregnant women failed to book antenatal clinic and others booked after 3th trimester due to lack of sustainable transport, cost of transport and long distance to antenatal clinic. On other hand, other respondents were facilitated to book because they were living nearby antenatal clinic and were not involved with transport cost.

2.5 Organizational/Institutional factors

Health facility rules and regulations are among factors associated with antenatal clinic booking. A study done in Papua New Guinea demonstrated that the health facility developed separate days for antenatal clinic booking and antenatal clinic subsequent visits. This regulation influenced antenatal clinic booking. Some respondents said that the days which were arranged for antenatal clinic booking were not favorable for them according to their own schedule of working days (Andrew et al., 2014). Another study conducted in Zimbabwe showed that there was 48 (55.8%) of affordability of ANC services and 38 (44.2%) of un-affordability. In the same study 10 (21.7%) of

interviewed pregnant mothers demonstrated that some of health facility provided ANC services for twenty four hours and the majority 36 (78.3%) were not providing ANC services for twenty four hours. Although ANC attendance campaign was provided by health provider, ANC booking was highly affected due to unavailability of daily ANC booking (Musendo et al., 2016). However, a qualitative study done in Kenya, Malawi and Ghana revealed that in Kenya, a pregnant woman is mandatory to have RCH card, otherwise she will not be received in health facilities for delivery; For that matter, health facility rules and regulations influenced pregnant women on antenatal clinic booking (Pell et al., 2013). Another factor identified in different studies was long waiting hours at antenatal clinic. The study illustrated that some respondents were reluctant in initiating antenatal clinic due to long waiting hours (Andrew et al., 2014).

Previous studies had been reported that religion and cultural believes are also among the factors associated with antenatal clinic booking (Onasoga et al., 2012; Belayneh et al., 2015). A study carried out in Nigeria found that 92 (70.6%) of respondents were negatively influenced by cultural believe towards antenatal clinic booking, meanwhile only 38 (29.4%) of respondents were positively influenced by cultural believes (Onasoga et al., 2012).

The results of religion concerning antenatal clinic booking had shown that Christian were booking in larger percentage than Muslim because most of the husbands practicing Islam prohibit their wives going out without absolute permission. A study conducted in Malawi by Banda (2013) revealed that 189 (93%) of pregnant mothers interviewed were Christians and only 15 (7%) were Muslim. Similar result related to faith in Southwestern Nigeria revealed that 478 (93.4%) of respondents were Christian while only 34 (6.6%) were Muslim (Aduloju et al., 2016). Moreover, study conducted in Southern Ethiopia revealed that 696 (92.7%) of respondents were Christians, 35 (4.7%) were Muslim and 20 (2.6%) were others (Asseffa et al., 2016).

2.6 Public policy factors

A study conducted in Kenya demonstrated that pregnant mothers were paying an amount of between Kshs 100 – 200 (USD 1 - 2) for ANC laboratory tests, which was found to be

reasonable price for them and was not affecting ANC booking. The same study illustrated that, in Uganda charge of maternal health services were affecting antenatal clinic booking (Chorongo et al., 2016). Another study conducted in Nigeria identified that laboratory tests fee influenced antenatal clinic booking negatively (Agu et al., 2015).

Beside the above factors, Fagbamigbe and Idemudia (2015) also identified antenatal clinic fee is among factors associated with antenatal clinic booking. Despite the national exemption policy that guarantees free health services for pregnant women, a study conducted in south eastern Tanzania reported that antenatal clinic diagnostic tests and clinic card were sold to pregnant women. These fees of antenatal clinic tests and antenatal card made some pregnant women not to book for antenatal clinic at all and others booked after third month of pregnancy (Gross et al., 2012).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Study Design

A descriptive cross – sectional study design using quantitative approach was employed.

3.2 Setting

The study was conducted at Mpwapwa district, which is one of the seven districts in Dodoma Region. Other Districts are Dodoma municipal, Kongwa, Kondoa, Chemba, Bahi and Chamwino.

Mpwapwa District is bordered by Kilosa District on the eastern part, Kongwa District on the Northern part, Chamwino District on the western area and Kilolo District on the southern part. The District covers a total area of 7,379 square Kilometers, which is about 18.1% of total area of Dodoma Region. The total population in the district is 305,046 (National Census, 2012).

Mpwapwa district has total of 62 health facilities with the following categorization: 1hospital, 4 health centres and 57 dispensaries.

3.3 Population

The study population comprised all pregnant mothers attending RCH clinic at Mpwapwa district hospital for receiving services during pregnancy such as checking blood pressure, hemoglobin level, blood grouping, confirmation of pregnancy and expected date of delivery, assessment of maternal and fetal well being, treatment and preventive measures like iron and folate supplements, tetanus toxoid vaccine (TT) and sulfadoxine pyrimethamine (SP) and development of birth and emergency plan.

The populations of pregnant mothers were about 40 – 50 per day, 200 – 250 per week, 880 – 1100 per month and almost 10560 – 13200 per year

3.4 Sample size

The sample size was determined by the prevalence in a study from Tanzania on timing of antenatal care for adolescent and adult pregnant women in southern-eastern Tanzania. The prevalence of pregnant women who booked antenatal clinic within first four months was 29% (Gross et al., 2012).

The sample size estimated by using **Cochran's formula (1975)** as follows**:**

$$n = \frac{Z^2\, p\,(1-p)}{d^2}$$

Where n= is the desired sample size

z= standard normal deviation = 1.96

p= proportion of pregnant women booked antenatal clinic within first four months in eastern-southern Tanzania, 29% = 0.29

d = degree of accuracy desired = 5% = 0.05

$$n = \frac{1.96^2 \times 0.2\,(1-0.29)}{0.05^2} = 317$$

Therefore the sample size was 317 respondents

To adjust for non response was 10% .The formula for calculating adjusted sample size was

N=n*(100%/100% - 10%) = 317 (100/90)

= 352

Therefore adjusted sample size was 352

3.5 Variables

3.5.1 Dependant variable

ANC booking

3.5.2 Independent variables

- Social demographic factors (age, education, marital status, employment, gravid, parity, tribe, occupation)
- Intrapersonal factors (knowledge and attitudes)
- Interpersonal factors (partner, family and customs or traditions)
- Institutional factors (religion and cultural believe, health facility rules and regulations)
- Community factors (transportations)
- Public policy factors (local policies)

3.6 Sampling procedure

A simple random sampling method using a rotary method was employed in pregnant women who were present at RCH during the study. Participants were required to select a piece of paper inside the box. Those who selected a piece of paper written YES were included in the study and those who selected NO were not included in the study. Participation was voluntary so participant could consent for their participation in the study. The sampling process continued until required number of respondents reached.

3.7 Inclusion criteria

All pregnant women who attended at Mpwapwa RCH clinic during the study period

3.8 Exclusion criteria

- Sick pregnant women who attended ANC at Mpwapwa RCH clinic during the study.

3.9 Data collection tools – instruments

Administration of structured questionnaire was used for data collection (Appendix A). Information was given on how to fill the questionnaire and clear clarification on important issues concerning filling of questionnaire provided. In order to avoid disturbance to the respondents, researcher (s) was/were collecting data during laboratory results waiting time and when they had already received all services. This questionnaire was developed and structured by the researcher. Open ended questions gave participants a chance to explain additional information which was not included in the options. The questionnaire was filled by study participants but those who were not able to fill by themselves; the questionnaire was filled by principal investigator or research assistant. All questionnaires filled by participants, researcher and research assistant were coded by numbers instead of participant's name and were stored in the locked cabinet to maintain confidentiality. Only principal investigator had access to it.

3.10 Validity

The questionnaire was reviewed by a midwife specialist, obstetrician and statistician experts to check for content validity of the tool. The experts were asked to review each question to measure if it was answering the research questions. The feedback from each expert was analyzed and compared to determine the degree of content validity from each question. The modifications suggested were considered before pre testing and data collection.

3.11 Reliability of the instrument

The data collection tool was pre-tested at Kibakwe health center with a small number of pregnant women (10% of the sample size which was 35 pregnant women). Swahili version questionnaires were used in pre-testing. The purpose of pre-testing was to verify the adequate collection of desired information as well as ensuring consistence of the questions. In pre-testing process, minor corrections were made before conducting the study.

3.12 Data analysis

Data analysis was conducted using statistical package for social science (SPSS) version 21. Incomplete questionnaires were not included in the analysis.

The analysis involved descriptive statistics to describe the sample population and relevant proportions, in frequency table and cross tabulations between independent and dependent variables; and chi-square test for showing association between study variables during statistical analysis. Continuous variables were represented by means and standard deviations and categorical data by whole numbers and percentages. Odds ratios determined association between antenatal booking and factors for its use. P-value of < 0.5 was considered statistically significant. Multivariate logistic regression was used to determine the association of independent variables and antenatal clinic booking. All the analysis based on the stated study objectives.

3.13 Ethical considerations

The proposal was granted ethical clearance by the Muhimbili University of Health and Allied Sciences Institutional Review Board (Appendix C). A letter to seek permission to conduct the study was presented to the District Executive Director (DED)/District Medical Officer (DMO) and permission to conduct the study was obtained from the DMO of Mpwapwa district. Participants were asked to provide written informed consent before the interview (Appendix E). For those who were not able to either read or write the researcher, research assistants or witness read the consent for them; if they agreed to participate in the study they put a thumb print. No penalty or mistreatment was directed to the participants who chose not to participate or decided to withdraw somewhere in the middle of the study. The consent contained full explanation about the benefits and risks of the study to participants and assurance of voluntary participation (participants can refuse to participate at any time during the interview) and it provided assurance of confidentiality and anonymity.

3.14 Dissemination

The final report of this study will be disseminated to Director of Post Graduate Studies,

MUHAS. Also relevant copies of the report will be disseminated to Dean School of Nursing, at MUHAS, Director of Library at MUHAS, DMO at Mpwapwa, and Midwifery academic journal for publication as partial fulfillment for the award of degree of Masters of Science in Midwifery and Women's Health.

CHAPTER FOUR

4.0. RESULTS

This chapter presents results of the data collected at Mpwapwa reproductive and child health (RCH) clinic between May and June 2017. A total of 352 pregnant women were interviewed. The chapter describes the socio-demographic characteristics of respondents and proportion of antenatal clinic (ANC) booking. It also describes intrapersonal factors, interpersonal, institutional, community and public policy factors associated with ANC booking.

4.1 Socio-demographic Characteristics

Of the 352 interviewed women, majority (55.7%) was aged less or equal to 25 years, mean age 25 and SD 6.914. Most of the respondents (88.6%) had formal education. Furthermore, 70.5% of respondents were un-employed. Regarding to marital status, majority (86.4%) of respondents was married. Apart from that, 59.1% of respondents were multigravida. Most of the respondents (57.1%) had given birth less than 2 times (Table 1).

Table 1: Socio-demographic characteristics

Variables	Responses (n, %)
Age	
Age less than or equal to 25 years	196 (55.7)
Age above or equal to 26 years	156 (44.3)
Education of respondents	
Formal education	312 (88.6)
Non- formal education	40 (11.4)
Occupation of respondents	
Employed	104 (29.5)
Un-employed	248 (70.5)

Marital status	
Married	304 (86.4)
Un-married	48 (13.6)
Gravidity	
Primegravida	144 (40.9)
Multigravida	208 (59.1)
Parity	
Parity < 2	201(57.1)
Parity ≥ 2	151(42.9)

4.2 The proportion of ANC booking at Mpwapwa RCH clinic

The overall proportion of early booking and late booking in this study was 30.11% and 69.88% respectively. Early booking was high (32.05%) among women who were above 26 years old; women who had formal education (31.73%); employed (43.26%); Primegravida (29.16%) and parity less than 2 (34.33%) (Table 2).

Table 2: Proportion of ANC booking at Mpwapwa RCH clinic.

Variable		Early booking	Late Booking	Total	% Proportion for early booking	%Proportion for late booking
Age (years)	< 25	56	140	196	28.57	71.42
	>26	50	106	156	32.05	67.94
Education	Formal education	99	213	312	31.73	68.26
	Non formal education	7	33	40	17.5	82.5
Occupation	Employed	45	59	104	43.26	56.74
	Non employed	61	187	248	24.59	75.41
Marital status	Married	94	210	304	30.92	69.08
	Un- married	12	36	48	25.00	75.00
Gravidity	Primegravida	42	102	144	29.16	70.84
	Multigravida	64	144	208	30.76	69.24
Parity	Parity < 2	69	132	201	34.33	65.67
	Parity ≥ 2	37	114	151	24.50	75.50
Overall Proportion		53	123	176	30.11	69.88

Intrapersonal factors.

4.3: Knowledge of respondents in ANC booking

4:3:1. Knowledge of respondents on best time to start ANC and number of attendance required.

Most of women (64.5%) knew that the best time to start ANC is first trimester. Majority of women (65.1%) said that the required number of ANC attendance for pregnant women is four times (Table 3).

Table 3.Knowledge of respondents on best time to start ANC and required number of attendance.

Variable		Number of respondent (n, %)
Best time to start ANC	First trimester	227 (64.5)
	Second trimester	109 (31.0)
	Third trimester	16 (4.5)
Number of attendance at ANC	Two times	37 (10.5)
	Three times	86 (24.4)
	Four times	229 (65.1)

4.3.2 Knowledge of respondents on the services provided at ANC

Majority of respondents (96%) knew that pregnant women need to go for ANC checkup, and most (67.3%) believed that it is required to go for ANC even if there is no complication during pregnancy. On the other hand, almost all (94%) of respondents said that pregnant woman need vitamin supplements during ANC visit, and majority (89.2%) knew that it is necessary to take iron folic acid tablet during ANC visit (Table 4).

Table 4: Knowledge on the services provided at ANC

Variable	Responses (n, %)	
	Yes	No
Need for pregnant woman	338 (96)	14 (4)

to go antenatal check-up		
Requirement to go for ANC even if there is no complication during pregnancy	237 (67.3)	115 (32.7)
Need of vitamin supplements during ANC visit	331 (94)	21 (6)
Necessity to take iron folic acid tablet during ANC visit?	314 (89.2)	38 (10.8)

4.3.3 Knowledge on basic test during ANC visits

Almost all respondents (96.6%) demonstrated that pregnant woman needs to undergo blood screening test for HIV infection. Moreover, 97.4% of respondents knew that hemoglobin level should be taken and almost all (92.6%) respondents knew that blood pressure is measured during their ANC visits. Majority of respondents (88.6%) illustrated that pregnant woman should test for blood sugar level during her ANC visits.

Table 5: Knowledge of respondents on basic test conducted during ANC visits

Variable	**Responses (n,%)**	
	Yes	No
Blood screening for HIV infection	340 (96.6)	12 (3.4)
Blood screening for hemoglobin level	343 (97.4)	9 (2.6)
Blood pressure examination	326 (92.6)	26 (7.4)
Blood sugar level	312 (88.6)	40 (11.4)

4.3.4 The influence of intrapersonal factors (Knowledge) in ANC booking

Knowledge about ANC booking was high among pregnant women aged above 26 years (75.6%); formal education (67.6%); employed (76.0%); married women (69.7%); multigravida (72.6%) and para two or more (72.8%). Only age, occupation, marital status and gravidity of respondents achieved statistical significant of the study to influence knowledge on ANC booking. (Table 6).

Table 6: The influence of intrapersonal factors (Knowledge) in ANC booking

Variable	Category	High knowledge	Low knowledge	Odds ratio	95% CI	P – value
Age (Years)	Below 25	119 (60.7)	77 (39.3)	0.498	0.313 – 0.792	0.003
	Above 26	118 (75.6)	38(24.4)	REF		
Education	Formal education	211 (67.6)	101 (32.4)	1.125	0.563 – 2.246	0.739
	Non- formal education	26 (65.0)	14 (35.0)	REF		
Occupation	Employed	79 (76.0)	25 (24.0)	1.80	1.071 – 3.024	0.025
	Non - employed	158 (63.7)	90 (36.3)	REF		
Marital status	Married	212 (69.7)	92(30.3)	2.12	1.144 – 3.929	0.015
	Un-married	25 (52.1)	23 (47.9)	REF		
Gravidity	Primegravida	86 (59.7)	58 (40.3)	0.560	0.356 – 0.879	0.011
	Multigravida	151 (72.6)	57 (27.4)	REF		
Parity	Parity < 2	127 (63.2)	74 (36.8)	0.640	0.404 – 1.012	0.056
	Parity $\geq$ 2	110 (72.8)	41 (27.2)	REF		

4.3.5 Attitude of respondents on ANC booking

Most of respondents (54%) agreed that early antenatal booking was good for their pregnancy. More than a half (59.7%) were willing to go for antenatal booking within the first three months of their pregnancy and majority (67.6%) believed that vitamin

supplements is good for the fetus. Most of them (67.0%) said that antenatal follow up was good to monitor mother's and fetus' health. Moreover majority (67.3%) of respondents were willing to do ultrasound scan at ANC during their pregnancy. Furthermore, about 59.4% of respondents were ready to face any pregnancy and delivery complication during their ANC visits (Table 7).

Table 7: Attitude of respondents on ANC booking

Variable	Response (n, %)				
	Strongly disagree	Disagree	Neutral	Agree	Strong agree
Early antenatal booking is good for my pregnancy	6 (1.7)	17 (4.8)	2 (0.6)	190 (54.0)	137 (38.9)
Will go for antenatal booking within the first three months of my pregnancy	9 (2.6)	43 (12.2)	4 (1.1)	210 (59.7)	86 (24.4)
Believe that vitamin supplement is good for the fetus	8 (2.3)	9 (2.6)	1 (0.3)	238 (67.6)	95 (27.0)
Antenatal follow up is good to monitor mother's and fetus' health	7 (2.0)	5 (1.4)	2 (0.6)	236 (67.0)	102 (29.0)
Willing to do ultrasound scan during my pregnancy	15 (4.3)	22 (6.3)	15 (4.3)	237 (67.3)	63 (17.9)
Readiness to face any pregnancy and delivery complication	34 (9.7)	49 (13.9)	15 (4.3)	209 (59.4)	45 (12.8)

4.3.6 The influence of intrapersonal factors (attitudes) in ANC booking

Although there was more positive attitude towards ANC booking among respondents aged 26 years and above, those without formal education, employed, un-married, multigravida and Parity more than or equal to 2, the results were not statistically significant. (Table 8).

Table 8: The influence of intrapersonal factors (attitudes) in ANC booking

Variable	Category	Positive attitude	Negative attitude	Odds ratio	95% CI	P – value
Age (Years)	Below 25	181(92.3)	15 (7.7)	0.400	0.142 – 1.125	0.073
	Above 26	151 (96.8)	5(3.2)	REF		
Education	Formal education	294 (94.2)	18 (5.8)	0.860	0.192 – 3.850	0.843
	Non- formal education	38 (95.0)	2 (5.0)	REF		
Occupation	Employed	101 (97.1)	3 (2.9)	2.478	0. 710– 8.643	0.142
	Non - employed	231 (93.1)	17 (6.9)	REF		
Marital status	Married	286(94.1)	18(5.9)	0.691	0.155– 3.077	0.626
	Un-married	46 (95.8)	2 (4.2)	REF		
Gravidity	Primegravida	132 (91.7)	12 (8.3)	0.440	0.175 – 1.105	0.074
	Multigravida	200 (96.2)	8(3.8)	REF		
Parity	Parity < 2	188(93.5)	13 (6.5)	0.703	0.273 – 1.807	0.462
	Parity $\geq$ 2	144(95.4)	7 (4.6)	REF		

4.4. Interpersonal factors (Partner, family and customs or traditions) in ANC booking

Majority (56%) of respondents reported that they were not accompanied by someone to ANC. Most of them (63%) demonstrated that they were getting support during pregnancy. About 58.8% of respondents illustrated that it was necessary to get

permission from their partners before they started ANC, and all respondents claimed that there were no any customs or traditions which were hindering them from attending ANC (Table 9).

Table 9: Interpersonal factors (Partner, family and customs or traditions) in ANC booking

Variable	Responses	
	Yes	No
Somebody accompanying the pregnant woman to clinic	155 (44.0)	197 (56.0)
Getting support during pregnancy	222 (63)	130 (37)
Getting permission from someone in order to start ANC	207 (58.8)	145 (41.2)
Having customs or traditions which hinder pregnant women from attending ANC	0 (0)	352 (100)

4.4.1 Support from other members within the family

More than half of respondents (53.7%) said that they were not accompanied by anybody to the clinic. Most of respondents (42.0%) reported that they were supporting themselves during pregnancy in term of daily activities. Furthermore, majority of respondents

(85.5%) said that their partners gave them support during pregnancy in term of money, and most of respondents (65.6%) said that they needed permission from their partner to attend ANC (Table 10).

Table 10: Support from other members within the family

Variable	Responses (n, %)					
	Partner	Mother	Parents	Father in-law	Yourself	Others
Accompanying pregnant women to clinic	119 (33.8)	15 (4.3)	18 (5.1)	9 (2.6)	189 (53.7)	2 (0.6)
Supporting pregnant women in term of daily activities	96 (27.3)	39 (11.1)	33 (9.4)	25 (7.1)	148 (42.0)	11 (3.1)
Supporting pregnant women in terms of money	301 (85.5)	5 (1.4)	25 (7.1)	17 (4.8)	2 (0.6)	2 (0.6)
Mostly asking for permission to attend ANC	231 (65.6)	11 (3.1)	15 (4.3)	6 (1.7)	87 (24.7)	2 (0.6)

4.4.2 The influence of Interpersonal factor (Partner, family and customs or traditions) in ANC booking

Despite the influence of interpersonal factors, ANC booking was high among pregnant women aged 25 years and below (65.3%); formal education (63.5%); employed

(76.9%); married (63.8%); Primegravida (70.8%); those with parity less than 2 (70.1%), only occupation, gravidity and parity were statistically significant (Table 11).

Table 11. The influence of Interpersonal factor (Partner, family and customs or traditions) in ANC booking

Variable	Category	Influence of interpersonal factors	Not influenced by interpersonal factors	Odds ratio	95% CI	P – value
Age (Years)	Below 25	128 (65.3)	68 (34.7)	1.209	0.782 – 1.869	0.394
	Above 26	95 (60.9)	61(39.1)	REF		
Education	Formal education	198 (63.5)	114 (36.5)	1.042	0.528 – 2.058	0.905
	Non- formal education	25 (62.5)	15 (37.5)	REF		
Occupation	Employed	80 (76.9)	24 (23.1)	2.448	1.454 – 4.121	0.001
	Non - employed	143 (57.7)	105 (42.3)	REF		
Marital status	Married	194 (63.8)	110(36.2)	1.155	0.619 – 2.159	0.650
	Not married	29 (60.4)	19 (39.5)	REF		
Gravidity	Primegravida	102 (70.8)	42 (29.2)	1.746	1.110 – 2.746	0.015
	Multigravida	121 (58.2)	87 (41.8)	REF		
Parity	Parity < 2	141 (70.1)	60 (29.9)	1.977	1.273 – 3.071	0.002
	Parity $\geq$ 2	223 (63.4)	129 (36.6)	REF		

4.4.3. The influence of institutional factors (cultural believe, health Facility rules and regulations) in ANC booking

More than half of respondents (53%) said that they were not waiting for a long time to get ANC services. (Figure 1).

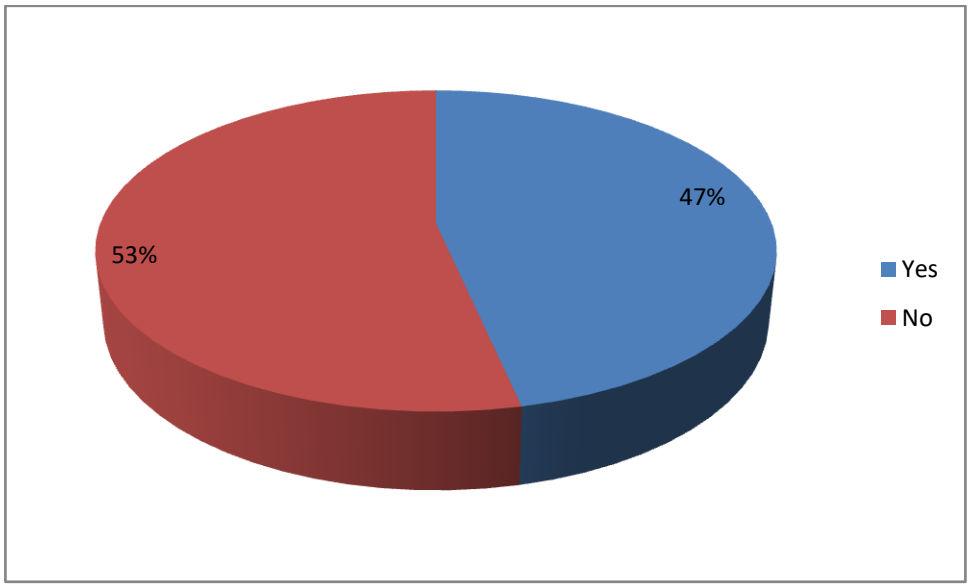


Figure 1: Institutional factors on ANC booking

4.4.4 Waiting time to get ANC services

Some respondents (39.8%) reported that they were waiting for more than an hour to get ANC services (Figure 2).

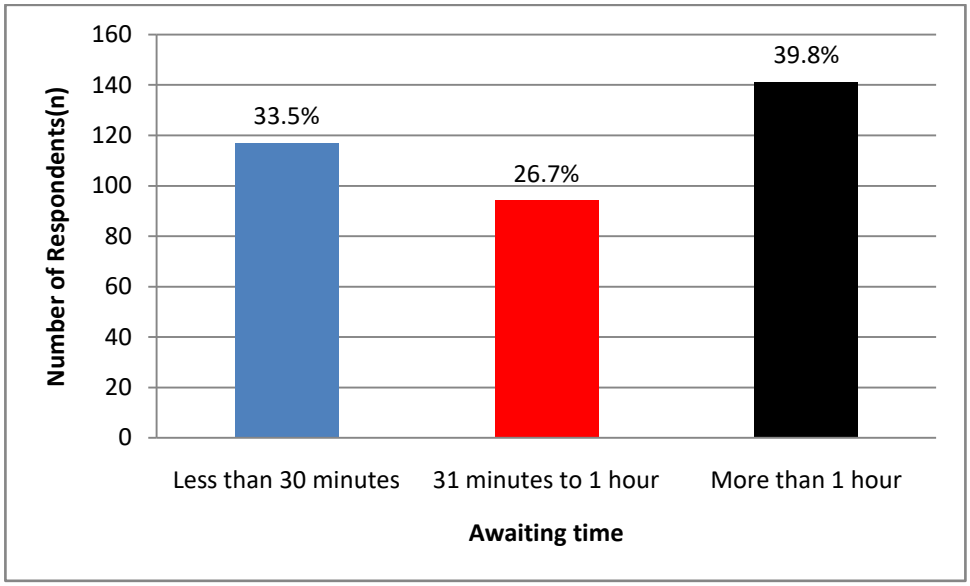


Figure 2. ANC waiting time

4.4.5. The influence of community factors (transportations) in ANC booking

Most of the respondents (65.1%) were walking within 0 to 5 kilometers to reach ANC clinic. (Figure 3).

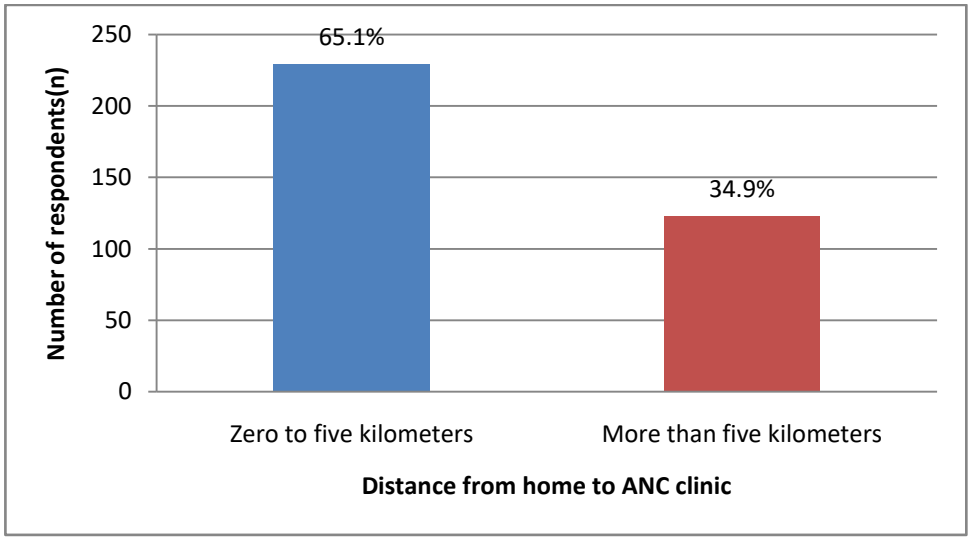


Figure 3: Distance from home to ANC clinic

4.4.6 Means of transport to ANC

Majority of respondents (89.5%) were walking by foot to reach ANC clinic (Figure 4).

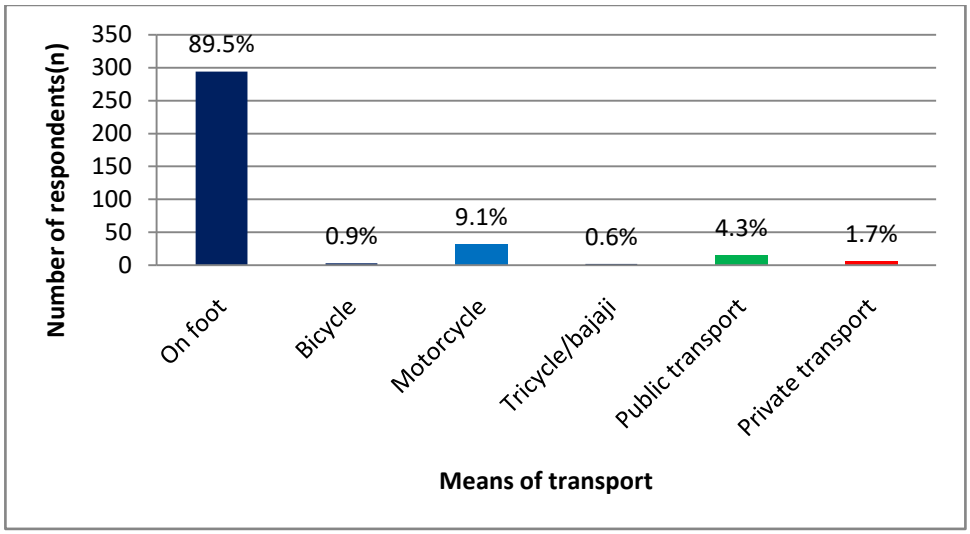


Figure 4: Means of transport

4.4.7 Relationship between distance from ANC clinic and gestational age booked

Most of respondents (75.6%) who booked at ANC after 3 months (late) were living in the distance of more than five kilometers. (Table 12).

Table 12. Show relationship between distance from ANC clinic and gestational age booked

Variable	category	First ANC booking		OR	CI	P - value
		Within the first 3 months	After 3 months			
Distance to ANC clinic.	0 to 5 km	76 (33.2)	153 (66.8)	1.540	0.939–2.526	0.086
	More than 5 km	30 (24.4)	93 (75.6)	REF		

4.4.8. The influence of public policy factors (local policies) in ANC booking

All respondents reported that they were not paying for ANC booking and clinic card (Table 13).

Table 13. Show public policy factors (local policies) in ANC booking

Variable	Responses (n, %)	
	Yes	No
Payment for antenatal clinic booking?	0 (0)	352 (100)
Payment for clinic card?	0 (0)	352 (100)

CHAPTER FIVE

The chapter discusses results, study limitation, strength, conclusion and recommendation.

5.0 Discussion

Intrapersonal factors

The results showed that about two third of the respondents commenced ANC after first trimester. This is due to the fact that most of the respondents were living in a distance of more than five kilometers. The distance of more than five kilometers to ANC was not favorable for pregnant women, and on other hand, majority of them were using foot as means of transport. In addition this result implied that, most of respondents had poor understanding of the importance of early ANC booking. This result was in agreement with a study conducted in Eastern Ethiopia (Zelalem et al., 2014) but the result differs from Lilungulu A and Matovelo D, 2016, hence more than three quota of pregnant women registered for ANC after first three months of pregnancy.

The study showed that most of women knew the best time to start ANC is first trimester and required number of ANC attendance throughout the pregnancy is four times. This high knowledge of knowing the best time to start ANC and required number of attending at ANC is due to the fact that most of respondents had formal education. Regarding the required number of attending at ANC, a previous study showed that, the mother should attend at ANC four times during the pregnancy (Henok et al., 2015).

As an effort to reduce the high incidence of iron deficiency anemia among the pregnant women all over the world, iron supplements were given to them during ANC visits. The results of this study demonstrated that, majority of respondents knew that pregnant women need to go for ANC checkup and it is necessary to take iron folic acid tablet during ANC visits in order to provide good hemoglobin level in their body. The findings of this study revealed that many respondents had good knowledge on the importance of taking iron supplements during pregnancy compared to the respondents who participated a study conducted in Dodoma municipal whereby a few respondents had good

knowledge on the importance of taking iron supplements during pregnancy (Lilungulu A and Matovelo D, 2016).

Furthermore nearly all respondents demonstrated that pregnant women need to undergo blood screening test for HIV infection and majority illustrated that pregnant woman should test for blood sugar level during ANC visits. These findings evidence the successful awareness and willingness concerning the understanding of prevention of mother to child transmission of HIV/AIDS. The findings of this study were high compared to other findings (Lilungulu A and Matovelo D, 2016) hence a few respondents agreed to be screened during their attendance to antenatal clinic visits.

Respondents in this study demonstrated that positive attitude towards ANC booking was gained through multi-attendance at ANC. This was evidenced by the fact that nearly all multigravida had positive attitude towards ANC booking. This finding differs from the study conducted in South West Ethiopia whereby nearly one - third of the respondents had negative attitude towards ANC booking (Henok et al., 2015).

Moreover the study illustrated that low socio-economic status influenced late ANC booking. This is evidenced by the fact that majority of the respondents were un-employed. This finding was in agreement with Kisuule et al, (2013) which had shown that the respondents who were of low socio – economic status negatively affected ANC booking.

Interpersonal factors

Most of respondents demonstrated that they were getting financial support from their partner during pregnancy and more than half of respondents said that it was necessary to get permission from their partners and significant others before they started ANC. The study findings indicated that, the problems of depending on financial support and permission from their partners facilitated them to attend ANC late. This observation was similar to that from Fantanesh and Fagbamigbe A, & Idemudia E (2015).

In addition, findings showed that more than half of respondents were not accompanied by anybody to the clinic. This lack of company to clinic influenced negatively ANC

booking. The findings of this study was not in agreement with Andrew et al., 2014 due to the fact that partners, parents and in laws were in role of accompanying pregnant woman to ANC and also were supporting in daily activities such as fetching water, washing clothes and cooking.

Institutional factors

About 39.8% of respondents reported that they were waiting for more than an hour to get ANC services. This long waiting time was due to inadequate staffs which was observed during data collection; only one trained nurse was allocated to provide services from 40 to 50 pregnant women per day. This finding was similar with study of Andrew et al., 2014, Musendo et al., 2016, whereby pregnant women were waiting for a long time due to shortage of staff, insufficient rooms for providing antenatal services and poor clinical data recording for the numbers of pregnant women in attendance.

Community factors

The commonest means of transport to ANC in this study was on foot. Since majority of respondents were walking to reach antenatal clinic, so the means of transport was not favorable to them and made them to attend ANC late or not attend at all. These findings differ from Onasoga et al., 2012 whereby the commonest means of transport was public transport.

Public policy factors

All respondents reported that they were not paying for ANC booking and clinic card. This indicated that the national exemption policy for pregnant women was adhered to. The results of this study were not in agreement with the study done in East-Southern Tanzania in which clinic card and antenatal clinic booking were obtained through payment (Gross et al., 2012). Also the study which was conducted in Papua New Guinea revealed that, they were paying for ANC services (Andrew at al., 2014).

5.1. Study limitation

The study population was recruited from a limited geographical area. Therefore the results cannot be generalized to other regions in Tanzania. However, these findings may represent other contexts with similar socio-economic characteristics.

5.2. Strength

The national exemption policy that guarantees free health services for pregnant women has been adhered since no woman reported any form of payment for ANC services throughout the study period. Moreover majority (59.1%) of the interviewed pregnant women were within the recommended age of child bearing (20 – 34 years).

5.3. Conclusion

The overall proportion of late booking was high. Some of the reasons for late booking were low socio-economic status, long walking distance to ANC, subordination of pregnant women on decision making concerning ANC booking, and dependence on partner for financial issues. Almost all respondents illustrated that pregnant woman needs to undergo blood screening test for HIV infection. Most of the pregnant women were not escorted to antenatal clinic. Majority of pregnant women depended on their partners in term of financial issues and permission to initiate ANC. Most of respondents were waiting for more than an hour to get ANC services. Major means of transport to ANC was foot. No any form of payment reported for antenatal clinic booking and clinic card.

5. 4. Recommendations

Education.

- It is important the District Medical Office to provide continuous health education, highlighting on topic like when to start ANC, minimum number of visits expected to attend at ANC and other components of ANC services through the media and community sensitization meetings.

Practice.

- In long run, Council Health Management Team (CHMT) should empower women through education and income generating activities as well as involvement of

husbands/partners during information, education and communication are highly needed. These information, education and communication on ANC must be intensified in order to reach all segments of the population.

Research.

- Future research should be conducted both urban and rural community to provide national data.

Policy.

- Government in collaboration with District Medical Office should construct more health facilities to improve availability and accessibility up to rural areas.

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APPENDICES

Appendix A: Questionnaire English Version

The aim of this questionnaire is to obtain information from pregnant mothers about Antenatal Clinic (ANC) booking.

Number of questionnaire……..

Residence ……..

Date…….……

INSTRUCTIONS

1. Please you are requested to give the honest answer as much as you can
2. Your answers will be kept in high confidentiality
3. Don't write your name
4. Put the mark V in the box to the correct answer

Section A: Demographic information

1. Age ……..
2. Tribe …….
3. What is your education level: ……
   - i. No formal education ☐ iii. Secondary education ☐
   - ii. Primary education ☐ iv. Above secondary education ☐
4. What is your occupation…….
   - i. Wage employed ☐ iv. Peasant ☐
   - ii. Self employed ☐ v. House wife ☐
   - iii. Business ☐ vi. Student ☐
5. What is your partner's occupation……..
   - i. Wage employed ☐ iv. Peasant ☐
   - ii. Self employed ☐ v. Fishman ☐
   - iii. Business ☐ vi. Student ☐

6. What is your partner's level of education?
   i. No formal education ☐ iii. Secondary education ☐
   ii. Primary education ☐ iv. Above secondary ☐
   education
7. What is your marital status……..
   i. Married ☐ iv. Divorced ☐
   ii. Single ☐ v. Widow ☐
   iii. Separated ☐
8. Gravidity……
   i. Primegravida ☐ iii. 5th and above gravid ☐
   ii. 2nd to 4th gravid ☐
9. Parity……..
   i. Para 1 ☐ iii. Para 5 and above ☐
   ii. Para 2 to 4 ☐ iv. Nullpara ☐
10. At what gestational age did you register for ANC in this pregnancy?
    i. Within the first three months ☐ ii. After three months ☐

Section B: Intrapersonal factors

Questions about Knowledge on ANC

11. When do you think is the best time for pregnant woman to start ANC?
    i. First trimester ☐ iii. Third trimester ☐
    ii. Second trimester ☐
12. At least how many times should pregnant mother make ANC follow up?
    i. 2 times ☐ iii. 4 times ☐
    ii. 3 times ☐
13. Is it necessary to give inj. TT during pregnancy?
    i. Yes ☐ ii. No ☐

14. If yes, how many times inj. TT should be given?

i. 2 times ☐ iii. 4 times ☐

ii. 3 times ☐ iv. 5 times ☐

NO.	QUESTIONS	YES	NO	GO TO
15	Do pregnant women need to go for antenatal check-up?	1	2	
16	If yes is it required to go for ANC even if there is no complication during pregnancy?	1	2	
17	Should first antenatal check-up be done in the first 3 months?	1	2	
18	Does a pregnant woman need vitamin supplement?	1	2	
19	Is it necessary to take iron folic acid tablet during pregnancy?	1	2	
	Does pregnant woman need to undergo the following test during her antenatal check-up?			
20	Blood screening for HIV infection	1	2	
21	Blood screening for hemoglobin level	1	2	
22	Blood pressure examination?	1	2	
23	Blood sugar level?	1	2	

Questions about attitude on ANC

No.	Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
24	Early antenatal booking is good for my pregnancy	1	2	3	4	5
25	I will go for antenatal booking within the first three months of my pregnancy	1	2	3	4	5
26	I believe that vitamin supplement is good for the fetus	1	2	3	4	5
27	Antenatal follow up is good to monitor mother's and fetus' health	1	2	3	4	5
28	I am willing to do ultrasound scan during my pregnancy	1	2	3	4	5
29	I am ready to face any pregnancy and delivery complication	1	2	3	4	5

Section C: Interpersonal factors

Questions about Partner, Family and Customs or traditions

30. Is there anybody to accompany you to clinic?

i. Yes ☐ ii. No ☐

31. Who accompany you to clinic?

i. Partner ☐ iv. Sisters/young sisters ☐

ii. In- laws ☐ v. Yourself ☐

iii. Parents ☐ vi. Others: Mention …… ☐

32. Do you get any support during pregnancy?

i. Yes ☐ ii. No ☐

33. Who give you support during pregnancy in term of daily activities?

i. Partner ☐ iv. Sisters/young sisters ☐

ii. In- laws ☐ v. Yourself ☐

iii. Parents ☐ vi. Others: Mention …… ☐

34. Who give you support during pregnancy in term of money?

i. Partner ☐ iv. Parents ☐

ii. In- laws ☐ v. Sisters/young sisters ☐

iii. Yourself ☐ vi. Others: Mention …….. ☐

35. Before you started ANC, was it necessary for you to get permission from any one to attend ANC?

i. Yes ☐ ii. No ☐

36. From whom did you most ask for permission to attend ANC?

i. Mother in law ☐ iv. Mother ☐

ii. Father in law ☐ v. Yourself ☐

iii. Partner ☐ vi. Others: specify ☐

37. Do you have any customs or traditions which hinder you from attending ANC?

i. Yes ☐ ii. No ☐

Section D: Organizational/Institutional factors

Questions about health facility and religion

38. Are you waiting for a long time to get ANC services?

i. Yes ☐ ii. No ☐

39. How many minutes do you take waiting for ANC services?

i. ≤ 30 minutes ☐ iii. More than 1hour ☐

ii. 31minutes up to 1hour ☐

40. Which religion are you: …….

i. Christian ☐ iii. Others: ……. ☐

ii. Islamic ☐

Section E: Community factors

Questions about transportation

41. How far is it from your home to this antenatal clinic?

i. Zero to five kilometers ☐

ii. More than five kilometers ☐

42. What is your means of transport to ANC?

i. On foot ☐

ii. Bicycle ☐

iii. Motor cycle ☐

iv. Tricycle/bajaji ☐

v. Public transport ☐

vi. Private transport ☐

Section F: Public policy factors

Questions about local policies

Do you pay for antenatal clinic booking?

i. Yes ☐

ii. No ☐

43. Do you pay for clinic card?

i. Yes ☐

ii. No ☐

44. How much do you pay for clinic card?

i. Between 500 – 1000/= ☐

ii. Between 1001 – 5000/= ☐

iii. More than 5000/= ☐

iv. Free of charge ☐

v. Other payment: Mention …….. ☐

KIAMBATISHO B: DODOSO – TOLEO LA KISWAHILI

Lengo la dodoso hili ni kupata taarifa kuhusiana na kutambua sababu zinazochangia akina mama wajawazito waende kuanza kupata huduma ya mama na mtoto aliopo tumboni

Namba ya dodoso ……..

Mahali Unapoishi …….

Tarehe…….……

MAELEKEZO

1. Unaombwa kujibu maswali yote kwa usahihi
2. Majibu yako yote yatatunzwa kwa usiri
3. Usiandike jina lako
4. Weka alama ya vema (V) katika kisanduku ulichopewa na maswali mengine unatakiwa kujaza katika nafasi zilizoachwa wazi

Kipengele A: Taarifa binafsi

1. Umri wako ……..
2. Kabila lako …….
3. Kiwango chako cha elimu ……

i. Hujasoma kabisa	☐	iii. Elimu ya sekondari	☐
ii. Elimu ya shule ya msingi	☐	iv. Zaidi ya sekondari	☐

4. Unafanya kazi gani?

i. Umeajiriwa	☐	iv. Mkulima	☐
ii. Umejiajiri	☐	v. Mama wa nyumbani	☐
iii. Mfanyabiashara	☐	vi. Mwanafunzi	☐

5. Kazi ya mwenzi wako:

i. Ameajiriwa	☐	iv. Mkulima	☐
ii. Amejiajiri	☐	v. Mvuvi	☐

iii. Mfanyabiashara ☐ vi. Mwanafunzi ☐

6. Kiwango cha elimu ya mwenzi……
   i. Hajasoma kabisa ☐ iii. Elimu ya sekondari ☐
   ii. Elimu ya shule ya msingi ☐ iv. Zaidi ya sekondari ☐
7. Hali ya ndoa ……..
   i. Umeolewa ☐ iv. Mmetengana ☐
   ii. Hujaolewa ☐ v. Mjane ☐
   iii. Umepewa taraka ☐
8. Huu ni ujauzito wa ngapi?
   i. Ujauzito wa kwanza ☐ iii. Zaidi ya ujauzito wa 4 ☐
   ii. Ujauzito wa 2 – 4 ☐
9. Umezaa mara ngapi?
   i. Mara moja ☐ iii. Zaidi ya mara 4 ☐
   ii. Mara 2 mpaka 4 ☐
10. Ulianza kliniki miezi mingapi katika ujauzito huu?
    i. Kati ya miezi 3 ya mwanzo ☐ ii. Baada ya miezi 3 ☐

Kipengele B: Mambo yanayomuhusu mama mjamzito

Maswali kuhusu Ufahamu

11. Unafikiri ni muda gani sahihi kwa mama mjamzito kuanza kliniki ya mama na motto aliopo tumboni?
    i. Kipindi cha mwezi mmoja hadi mitatu ya mwanzo wa ujauzito ☐
    ii. Kipindi cha miezi mine hadi sita ya ujauzito ☐
    iii. Kipindi cha miezi saba hadi tisa ya ujauzito ☐
12. Angalau mara ngapi mama mjamzito anatakiwa kuhudhuria kliniki?
    i. Mara 2 ☐ iii. Mara 4 ☐
    ii. Mara 3 ☐

13. Je, ni muhimu kuchoma sindano ya pepopunda wakati wa ujauzito?

a. Ndio ☐ ii. Hapana ☐

14. Kama ndio anatakiwa achome mara ngapi?

a. Mara 2 ☐ iii. Mara 4 ☐

b. Mara 3 ☐ iv. Mara 5 ☐

NO.	Maswali	Ndio	Hapana	Nenda namba…
15	Je, wanawake wajawazito wanatakiwa kwenda kliniki kwa ajili ya uchunguzi?	1	2	
16	Kama ndiyo, wanatakiwa kwenda kliniki hata kama hawana matatizo ya ujauzito?	1	2	
17	Ni lazima uchunguzi wa mara ya kwanza wa mama wajawazito ufanyike katika miezi 3 ya mwanzo?	1	2	
18	Je, mwanamke mjamzito anahitaji nyongeza ya vitamini?	1	2	
19	Je, ni muhimu kumeza vidonge vya madini chuma wakati wa ujauzito?	1	2	
	Je, mwanamke mjamzito anatakiwa kufanyiwa uchunguzi wa mambo yafuatayo wakati wa ujauzito wake?			
20	Damu kwa maambukizi ya VVU?	1	2	
21	Kuangalia uwingi wa damu?	1	2	
22	Shinikizo la damu ?	1	2	
23	Kiwango cha sukari katika damu?	1	2	

Maswali kuhusu Mtazamo

No.	Swali	Sikubaliani kabisa	Sikubaliani	Sikubaliani wala sikatai	Nakubali	Nakubali sana
24	Kuanza mapema kliniki ya ujauzito ni vizuri kwa mimba yangu	1	2	3	4	5
25	Nitaanza kliniki katika miezi mitatu ya mwanzo ya ujauzito wangu	1	2	3	4	5
26	Naamini kuwa kuongeza vitamini ni vizuri kwa ajili mtoto aliopo tumboni	1	2	3	4	5
27	Kuhudhuria kliniki ni vizuri kwa afya ya mama na mtoto aliopo tumboni	1	2	3	4	5
28	Mimi niko tayari kufanya ultrasound scan wakati wa ujauzito wangu	1	2	3	4	5
29	Mimi niko tayari kwa matatizo yoyote ya wakati wa ujauzito na	1	2	3	4	5

	kujifungua					

Kipengele C: Mambo yanayohusu mwenzi, watu wa karibu na mila au desturi

Maswali kuhusu mwenzi, watu wa karibu na mila au desturi

30. Kuna mtu yeyote anakusindikiza kliniki wakati wa ujauzito?

i. Ndio ☐ ii. Hapana ☐

31. Nani anakusindikiza kliniki wakati wa ujauzito?

i. Mwenzi wako ☐ iv. Dada zako/wadogo zako ☐

ii. Mama mkwe/wifi ☐ v. Wewe mwenyewe ☐

iii. Wazazi wako ☐ vi. Wengineo: Taja …….. ☐

32. Unapata msaada wowote wakati wa ujauzito?

i. Ndio ☐ ii. Hapana ☐

33. Nani anakusaidia kazi za nyumbani wakati wa ujauzito?

i. Mwenzi wako ☐ iv. Dada zako / wadogo zako ☐

ii. Mama mkwe/wifi ☐ v. Wewe mwenyewe ☐

iii. Wazazi wako ☐ vi. Wengineo: Taja …… ☐

34. Nani anakupa msaada wa fedha wakati wa ujauzito?

i. Mwenzi wako ☐ iv. Wazazi wako ☐

ii. Mama mkwe /wifi ☐ v. Dada zako /wadogo zako ☐

iii. Wewe mwenyewe ☐ vi. Wengineo: Taja …… ☐

35 Je, kabla ya kuanza kliniki, ni lazima upewe ruhusa na mtu yeyote?

i. Ndio ☐ ii. Hapana ☐

36. Kutoka kwa nani zaidi unayemwomba ruhusa ya kuhudhuria kliniki?

i. Mama mkwe ☐ iv. Mama ☐

ii. Baba mkwe ☐ v. Mwenyewe ☐

iii. Mwenzi wako ☐ vi. Wengineo: Taja…… ☐

37. Je, kuna desturi au mila ambayo inakuzuia kuhudhuria kliniki?

i. Ndio ☐ ii. Hapana ☐

Kipengele D: Mambo yanayohusu taasisi na dini

Maswali yanayohusu taasisi na dini

38. Je, huwa unasubiri kwa muda mrefu kupata huduma za kliniki?

i. Ndio ☐ ii. Hapana ☐

39. Kwa dakika ngapi unakaa Kusubiri huduma za kliniki?

i. Dakika≤ 30 ☐ iii. Zaidi ya saa 1 ☐

ii. Dakika 31 hadi saa 1 ☐

40. Dini yako …….

i. Mkristo ☐ iii. Nyingine: Taja ☐

ii. Muislam ☐

Kipengele E: Taarifa kuhusu Jamii

Maswali kuhusu usafiri

41. Kuna umbali gani hadi kufika kituo cha kutolea huduma?

i. Kilomita 0 hadi 5 ☐ ii. Zaidi ya kilomita 5 ☐

42. Unatumia usafiri gani wakati wa kwenda klinic?

i. Kwa miguu ☐ iv. Bajaji ☐

ii. Baiskeli ☐ v. Usafiri wa umma ☐

iii. Pikipiki ☐ vi. Usafiri binafsi ☐

Kipengele F: Taarifa kuhusu sera

Maswali kuhusu sera ya hospitali

Je unatoa malipo yoyote kwa ajili ya kujiandikisha kliniki?

i. Ndio ☐ ii. Hapana ☐

43. Je unatoa malipo yoyote kwa ajili ya kupata kadi ya kliniki

i. Ndio ☐ ii. Hapana ☐

44. Unalipa kiasi gani ili kupata kadi ya kliniki?

i. Kati ya 500 – 1000/= ☐ iv. Hakuna malipo ☐

ii. Kati ya 1001 – 5000/= ☐ v. Malipo mengine: Taja… ☐

iii. Zaidi ya 5000/= ☐

Appendix c: clearance letter

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES

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Ref. No. MU/ PGS/SAEC/Vol. IX/

5th May, 2017

Mr. Bahati Simon Katembo
MSc. Midwifery and Women's Health
MUHAS.

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "ASSESSING FACTORS ASSOCIATED WITH ANTENATAL CLINIC BOOKING AMONG PREGNANT WOMEN IN MPWAPWA USING THE ECOLOGICAL MODEL FOR HEALTH PROMOTION"

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from 2nd May, 2017 to 1st May, 2018. In case you do not complete data analysis and dissertation report writing by 1st May, 2018, you will have to apply for renewal of ethical clearance prior to the expiry date.

Prof. Andrea B. Pembe
DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc: Dean, School of Nursing

APPENDIX D: INFORMED CONSENT FORM

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS

CODE NO.

Consent to participant in a research study

Greetings! My name is **Katembo, Bahati Simon;** I am a second year post graduate student, pursuing a MSc. of midwifery and women health. Currently I am conducting a study on **assessing factors associated with Antenatal clinic (ANC) booking among pregnant women in Mpwapwa RCH clinic**

using ecological model for health promotion

Purpose: To assess factors associated with antenatal clinic booking among pregnant women in Mpwapwa RCH clinic using ecological model for health promotion.

Sponsor: Self sponsor

Involved Participants

This study will involve all pregnant women who attending antenatal clinic. The participation in the study will be voluntary. You are free to decide either to participate in the study or not. If you will participate, I will request you to answer questions in relation to late booking at ANC.

Risk: The study will not harm you in any way. Time taken will be about 20 minutes

Benefit: This study will help to provide information about factors associated with antenatal clinic booking among pregnant women attending at reproductive and child health (RCH) clinic. So that the researcher will be able to recommend appropriate strategies which will make pregnant mothers to initiate ANC early in order to prevent pregnancy related complications and/or maternal and perinatal death which could be prevented.

Confidentiality: All information which will be collected from you will remain confidential and it will be used for study purpose only. This will be anonymous where by codes will be used instead of names. If the results of the study will be published or presented in a scientific meeting, no information that might identify you as a participant will be used.

Compensation: There will be no reimbursement of any kind in participation.

The right to participate/Refuse participation: You have the right to agree or refuse to participate or withdraw from the study at any time.

Questions/Problems: In case of any problem/questions please feel free to contact the principle investigator (P.I); Katembo, Bahati Simon, Muhimbili University of Health and Allied Sciences, School of Nursing, Box 65001, Dar-es-salaam, Tanzania. Phone number (0786-374885). You're free to ask any question before, during and after the interview. If you ever have questions about your rights as a respondent, you may call **Dr. Joyce Masalu,** Chairperson of the Senate Research and Publications Committee, P. O. Box 65001, Dar-es-salaam. Tel: 2150302-6

Consent: I have read and understood this consent form. I have no further questions and I understand that by signing this form below I am approving to participate in this study. I have signed this form pair and I have my copy of the consent to keep.

Signature of the participant ……Date……..

Code number of the participant …….

Signature of Researcher …….. Date……

KIAMBATISHO E: FOMU YA KURIDHIA KUSHIRIKI KATIKA UTAFITI

– TOLEO LA KISWAHILI

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI,

KURUGENZI YA UTAFITI NA MACHAPISHO

NAMBA YA DODOSO. | | | |

Ridhaa ya kushiriki katika mafunzo ya utafiti.

Salam! Naitwa Katembo, Bahati Simon, mwanafunzi wa uzamili wa Ukunga na afya ya akina mama. Kwa sasa nafanya Utafiti kuhusiana na kutambua sababu zinazochangia akina mama wajawazito kuanza kuhudhuria kliniki ya mama na mtoto aliopo tumboni katika kliniki ya hospitali ya wilaya ya Mpwapwa.

Mfadhili: Ninajifadhili mwenyewe

Washiriki/Mwenendo: Utafiti huu una wahusu akina mama wajawazito wote ambao wanahudhuria kliniki yao hapa. Ushiriki katika utafiti huu ni hiyari ya mtu. Upo huru kushiriki katika utafiti au kutoshiriki. Endapo utashiriki, nitakuomba ushirikiano wako katika kujibu maswali yangu yanayohusiana na kutambua sababu zinazochangia akina mama wajawazito kuanza kuhudhuria kliniki ya mama na mtoto aliopo tumboni katika kliniki ya hospitali ya wilaya ya Mpwapwa.

Muda: Utafiti huu utachukua muda wa dakika kumi na tano hadi ishirini tu. Pole kwa usumbufu.

Madhara: Hakutakuwa na madhara yoyote yale katika utafiti huu.

Faida: Utafiti huu utakusaidia kutambua sababu zinazochangia akina mama wajawazito kuanza kliniki ya mama na mtoto aliopo tumboni.

Hivyo itamwezesha mtafiti kushauri mikakati stahiki ya kuwafanya akina mama waja wazito kuanza kliniki mapema ili kuzuia madhara yatokanayo na ujauzito ikiwa ni pamoja na vifo vya akina mama na watoto wachanga.

Siri: Taarifa zote utakazotoa zitabaki kuwa ni siri na zitatumika kwa madhumuni ya utafiti tu. Usiri utazingatiwa kwa kutumia namba ya dodoso na sio jina la mtu. Endapo matokeo ya utafiti huu yatatolewa katika mkutano wa kisayansi, hakuna taarifa ambayo itaweza kutambua wewe kama mshiriki.

Fidia: Sitaweza kukupa kitu chochote kile kama malipo kabla, wakati au baada ya utafiti.

Haki ya kushiriki/kukataa ushiriki katika utafiti: Una haki ya kukubali au kukataa kushiriki au kujiondoa katika utafiti muda wowote ule.

Maswali/wasiwasi: Endapo utakuwa na swali au wasiwasi wowote ule wasiliana na mtafiti mkuu, Katembo, Bahati Simon, sanduku la posta 65001, Dar-es-salaam, Tanzania au simu namba: 0786-374885.

Kama utakuwa na maswali yoyote kuhusu ushiriki wako unaweza kupiga simu kwa mwenyekiti wa Kamati ya Chuo ya Utafiti na Machapisho **Dr. Joyce Masalu,** S.L.P 65001 Dar es Salaam, namba ya simu: 2150302-6

Ridhaa: Nimesoma vizuri na nimeelewa taarifa zote zilizoandikwa katika fomu hii. Nakubali kushiriki katika utafiti huu kwa kuweka saini yangu na kupata nakala yangu.

Saini ya mshiriki…… Tarehe……

Namba ya utambulisho wa mshiriki……..

Saini ya mtafiti…….Tarehe……..