Barriers for optimal use of antenatal services among pregnant women in Tarime district - Mara, Tanzania

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Master of Public Health Dissertation
Muhimbili University of Health and Allied Sciences
October, 2018

Muhimbili University of Health and Allied Sciences
School of Public Health and Social Sciences

BARRIERS FOR OPTIMAL USE OF ANTENATAL SERVICES AMONG PREGNANT WOMEN IN TARIME DISTRICT- MARA, TANZANIA

By

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A Dissertation Submitted in (Partial) Fulfilment of the Requirement for the Degree of Master of Public Health of

Muhimbili University of Health and Allied Sciences

October, 2018

CERTIFICATION

The undersigned certify that they have read and hereby recommend for examination by Muhimbili University of Heath and Allied Sciences a dissertation entitled***: ''Barriers for optimal use of antenatal services among pregnant women in Tarime district- Mara, Tanzania'',*** in (partial) fulfilment of the requirements for the degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences.

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Dr Gasto Frumence

(Supervisor)

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Date

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ACKNOWLEDGEMENT

First and above all I praise the almighty God for providing me this opportunity and granting me the capability to proceed successfully. I would not have been able to complete my dissertation without guidance of my supervisor, help from friends, co- workers and support from my lovely family and wife.

I would like to express my deepest gratitude to my supervisor Dr Gasto Frumence who agreed to supervise me despite of his many academic and professional obligations. I provide my thanks for his adequacy guidance, caring, patience and provided me with excellent environment for doing this research whilst allowing me the room to work on my own.

I would like to thank my employer Jhpiego- Tanzania for support and allowing me time to pursue this course.

In addition, special thanks should go to data collectors Merengo Joseph and Mary Mwakyusa for their commitment to the highest standards have inspired and motivated me. I would also like to thank my parents, brothers and sisters, my daughter Abigail, son Ethan for their encouragement and thoughtful understanding.

To end with I would like to thank my lovely wife Sheila Manento. She was always there praying, encouraging me up, stood by me through the good and challenging times. Her care, and support and unvarying patience have taught me much about sacrifice and cooperation

DEDICATION

This dissertation is dedicated to my wife Sheila, my children Ethan and Abigail and to all my family. All were together with me provide the support which has made me to accomplish this work.

ABSTRACT

Background: Antenatal care is an approach employed to reduce the maternal and perinatal morbidity and mortality. Tanzania adapted the WHO focus antenatal care which focus on risk approach, which targeted women based on risk factors, to an individualized, targeted approach, which aims to detect complications as they arise. It also deals with treatment of identified conditions, supplementation of minerals and health information[1]. Despite the effort of the government to provide antenatal care services for free from public and some faith based facilities, still large percentage of pregnancy women attend less than four antenatal visits compared to the standard which require to have more the four antenatal visits to be able to receive complete package [2, 3]. Many studies have been conducted to understand the barriers but mostly were quantitative studies and non-have been conducted in Tarime District. This study was conducted qualitatively and it explored the barriers for optimal use of ANC among pregnant women in Tarime Dc.

Objective: The study aimed to explore the barriers for optimal use of antenatal care among pregnant women in Tarime District- Mara, Tanzania.

Methodology: The study employed a cross section explorative approach by conducting in-depth interviews to 8 pregnant women, 4 community health workers and 4 health facility in-charges and also focus group discussions to 32 pregnant women to explore individual barriers, community barriers and facility barriers for optimal use of ANC among pregnant women. Data were recorded in tape recorder and then stored in computer before transcribed. Data were then analysed by thematic approach by familiarized with data, assigned preliminary codes to the data in order to describe the content, searched for patterns or themes in the codes across the different interviews, reviewed themes, defined and named themes and produced the report.

Results: Upon analysis of the result, the study revealed the following key findings: barriers for optimal use of ANC can be grouped into community barriers, facility barriers and individual barriers. The identified community barriers were low community awareness on ANC and myths

about ANC in the community. The identified themes under facility barriers were facility accessibility, shortage of skilled staff which goes in hand with quality of ANC services and availability of essential medical supplies. The generated themes under individual barriers were age of the pregnant women, level of education, economic status, presence of risk factors, marital status, presence of history of complication and number of parity.

Conclusion: This study revealed that there are a number of community, individual and health facility barriers which hinder optimal use of antenatal care services in Tarime district. Health education at health facilities and at community should be strengthened to remove community and individual barriers among pregnant women to utilize antenatal care. Health facility in-charges should make sure the essential supplies are available in advances to avoid stock out.

TABLE OF CONTENTS

ABBREVIATIONS

AIDS	**A**cquired immune deficiency syndrome
ANC	Antenatal Care
CHW	Community health worker
HC	Health Centre
HIV	Human immunodeficiency virus
IDI	In depth Interview
MDG	Millennium Development Goal
MMR	Maternal Mortality Rate
NBS	National Bureau of Statistics
RCH	Reproductive and Child Health
SP	Sulphadoxine Pyrimethamine
STI	Sexual transmitted Infection
TBA	Traditional Birth Attendant
TDHS	Tanzania Demographic and Health Survey
TDHS-MIS	Tanzania Demographic and Health Survey and Malaria Indicator Survey
UN	United Nations
UNFPA	United Nations Population Fund

WHO World Health Organization

DEFINITION OF KEY TERMS

Antenatal Care –is the care received by a pregnant women and her spouse in health facilities, it is delivered by a nurse midwife, medical doctors and even obstetrician. The government of Tanzania has a policy in which antenatal care is provided free in public facilities and some faith based facilities [1, 2]

Maternal Mortality- is the death of a woman while pregnant or within 6 weeks of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes [4].

Maternal mortality rate is calculated by dividing all death of pregnant women in a period of one year to a one hundred thousand live birth [4].

Sexual transmitted Infections - are infections that are passed on from one person to another through sexual contact. The most common diseases are HIV, syphilis, chlamydia, gonorrhoea, hepatitis and human papilloma virus [5].

Optimal utilization of ANC- the number of visits to a health facility a pregnant woman is required to make during her course of pregnancy for screening, treatment, identification of danger signs and receiving mineral supplementation. According to current national focus antenatal care guideline the pregnant women are required to have at least four visits to a health facility for antenatal care [1]

Illness level -is the extent a person is felling unwell, it may be minor, moderate, major or extreme illness [6]

Focus antenatal care- focus of ANC from a "risk approach," which targeted women based on risk factors, to an individualized, targeted approach, which aims to detect complications as they arise [1]

CHAPTER ONE

INTRODUCTION

1.1 Background information

Maternal and child health services were established in Tanzania in 1974. Tanzania adopted the Safe Motherhood Initiative (SMI) in 1989, following the official launch of the Global Safe Motherhood Initiative in 1987 in Nairobi, Kenya. Subsequently, the 1994 International Conference for Population and Development (ICPD) emphasized access to comprehensive reproductive health services and rights. In response to the ICPD Plan of Action, Tanzania established the Reproductive and Child Health Section (RCHS) within the Ministry of Health and developed a National Reproductive and Child Health Strategy [7].

Antenatal care is among the package which is provided through reproductive and child health programme [8]. In the year 2002, Tanzania adapted the WHO recommendation on focused antenatal care (FANC) in which goal-oriented four visits were targeted with the target of improve care given to pregnant mothers in a wide ranging manner. FANC planned to support all-important services and care that promotes the early detection of complications and the initiation of early and appropriate treatment, including, if necessary timely referral [1].

The basic FANC model involves four antenatal visits that include individual counseling, targeted assessments, and the provision of safe, cost-effective, and evidence-based interventions. The underlying principles of FANC are the integration of care through health promotion, disease prevention, detection and treatment of existing diseases, and birth preparedness. During their visits, women are counselled on topics such as birth preparedness, danger signs, nutrition, exclusive breast feeding, and family planning. The FANC model recognizes that the antenatal period is a key entry point for many women into the health system, and so the model integrates ANC with care and counselling related to several other conditions. Women are immunized against tetanus and tested and treated for anaemia as well as vitamin A deficiencies[1]. They also receive testing and treatment for HIV/AIDS, STIs, malaria, and tuberculosis [1, 9].

Tanzania developed a strategic One Plan II which aligns with sustainable development goals with three key strategies, first strategy aims to strengthen the reproductive maternal, newborn,

child and adolescent health with emphasis of focused antenatal care (FANC). The second strategy targets the sensitization of community to the issue of reproductive care. Third strategy is to ensure continuous improvement of clinical knowledge and skills of health providers in reproductive, maternal, newborn, child and adolescent health (RMNCAH) [7].

Optimal utilization of health care services particularly antenatal care by the population is affected by the health seeking behaviours of the particular population. It has different barriers which can be categorized into physical, socio-economic and socio-culture barriers [10]. Utilization of health care means use of health care services by the population. Therefore, physical accessibility to a facility, its ability to provide required health services, patient's ability to pay, cultures and norms in which she lives are all essential barriers of utilization of health care services in case of needs to attend health facility [10].

There are different reasons affecting optimal utilization of health care services between developed and developing countries. The number of contact with health facilities in America were influenced by their financial status and health insurance coverage and women are frequent users of health facility compared to men, while in Pakistan women are unable to travel alone to the near village to seek health care, they need husband or mother in law to accompany her [11, 12]. In Tanzania the optimal utilization of health care services is affected by among other things out of pocket costs, skills of the health care providers and poor provider communication [13]

1.2 Problem statement

Tanzania is among the sub-Sahara African nation with high maternal and perinatal mortality of 556/100000 and 59/1000 respectively [3]. Most of these deaths are preventable when the quality of care and social cultural norms are taken into considerations. The ministry of health has developed preventive measures in the reproductive and child health program, one of the preventive measures is antenatal care which start as early as women suspect herself to be pregnant [1]. According to Tanzania RCH guideline of 2002 which was adopted from WHO the woman who is pregnant is supposed to attend ANC for at least four visits. Each visit has a

package of care for the woman, spouse and children receive, and when the woman visit all four visits decrease the risk of maternal and perinatal complication [1].

The percentage of women attending all visits in Tanzania is 51% where by large percentage is not receiving ANC according to standard, and early identification and prevention of maternal and perinatal complication become difficult [3]. The situation is worse in Mara region and Tarime district whereby despite the effort provided by the government and non-government organizations such as provision of service for free, health education provided by community health workers and health care providers, radio addressing campaign, the percentage of pregnant women attending at least four visit is still below national average in Mara region and Tarime district by 41% and 24% respectively [14].

A number of quantitative studies have been done in Tanzania and reported a number of factors contributing to non-optimal utilization of ANC, which include among others; income of the pregnant women, education status, cultural belief and attitude of health providers [13, 15]. However, there are few qualitative studies that attempted to explore health facilities barriers contributing to failure of women to complete four visits [16]. Furthermore, no studies have been conducted in Mara particularly in Tarime district where the utilization of ANC is very low (24%) to explore individual barriers, health facility barriers and community barriers at the same time. Therefore, this study attempted to fill this gap.

1.3 Rationale of the Study

This study aimed to explore community barriers, health facility barriers and individual barriers among pregnant women towards optimal utilization of antenatal care services in Tarime District. The generated information from this study is expected to help Tarime District to understand the barriers of antenatal care among pregnant women and help them to find solutions or use recommendations from this so as to improve utilization of antenatal care services.

1.4 Research Question

- What are the barriers for optimal utilization of antenatal care among pregnant women in Tarime District?

Specific research questions

1. What are individual barriers for optimal utilization of antenatal care among pregnant women in Tarime District?
2. What are the health facility barriers for optimal utilization of antenatal care among pregnant women in Tarime District?
3. What are the community barriers for optimal use of antenatal care among pregnant women in Tarime District?

1.5 Study Objectives

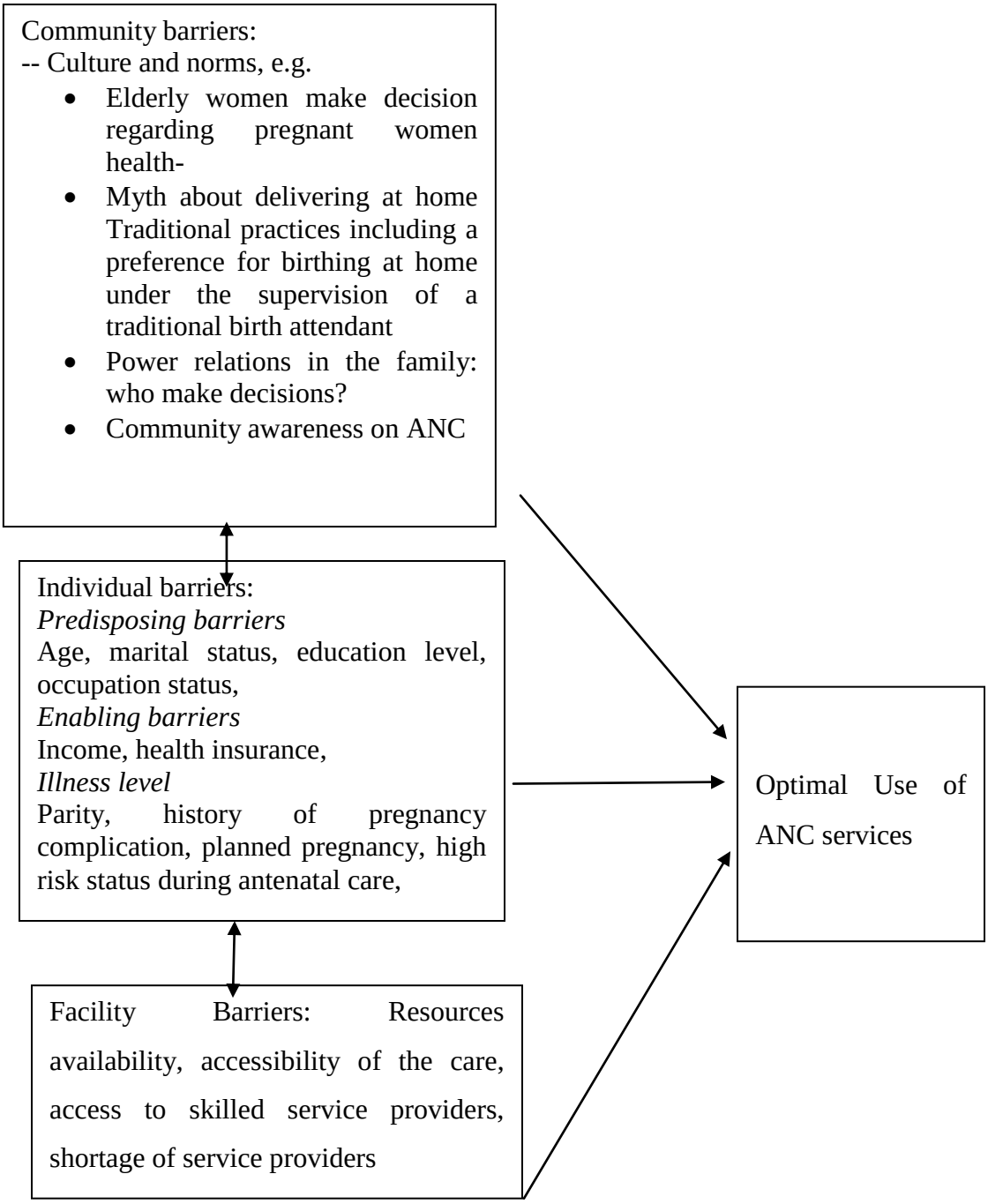
Broad objective

- To explore barriers for optimal use of antenatal care among pregnant women in Tarime District.

Specific objectives

1. To explore the individual barriers for optimal use of antenatal care among pregnant women in Tarime District
2. To identify facility barriers for optimal utilization of antenatal care among pregnant women in Tarime District.
3. To explore the community barriers for optimal utilization of antenatal care services among pregnant women in Tarime District.

1.6 Conceptual framework: Individual, community and facility barriers influencing non optimal use of ANC. (Modified Andersen and Newman Framework[17]) *Figure 1*



Barriers affecting optimal utilization of antenatal care can be grouped into three categories: community, facility and individual barriers.

Community barriers includes all barriers which originated from a certain group of people who are living in a specified geographical areas and share culture, customs and norms. Example people living in urban area have different living standard compared to rural area.

Facility barriers for optimal use of antenatal care includes all barriers related to health care providers such as skills, attitudes and availability of skilled staff; infrastructures such as privacy and enough rooms; medical supplies and equipment such as availability of reagent for hemoglobin estimation, malaria testing, syphilis and HIV testing, weigh scale, examination bed and ultrasound.

According to Andersen and Newman Framework of Health Services Utilization, individual barriers may facilitate and impedes utilization of health care. They grouped these barriers into predisposing barriers, enabling barriers and illness level [17].

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature from books, journals, policy and guidelines related to the barriers for optimal antenatal care services. The review will be done based on the three specific objectives: individual barriers for optimal use of antenatal care among pregnant women, facility barriers for optimal utilization of antenatal care among pregnant women and community barriers for optimal utilization of antenatal care services among pregnant women in Tarime District.

2.1 Overview of the ANC services

Antenatal care service is among the pillar of safe mother hoods which was initiated to provide care to women during her pregnancy. It involves health education, physical examination, laboratory investigation (screening), counseling, history taking, and medication (mineral supplementation and treatment) [1]. Spouses are also involved in the antenatal care services[1]. During the course of pregnancy, the woman is required to attend at least four visits, and each visit has its own packages which are required to be given to pregnant women and her spouses. The lesser the number of antenatal care visits the lesser the identification of risks during the course of pregnancy [1, 3, 7]. In Tanzania 51% of pregnant women attended four or more antenatal care visits [3]. There are many factors which hinder the pregnant women to attend four or more antenatal care visits.

2.2 Individual barriers

Predisposing barriers, enabling barriers and level of illness are the individual barriers which affect continuous use of health care among pregnant women [17].

Predisposing barriers

A social culture characteristics of an individual which are exist before the occurrence of illness, it can be age of the individual, her/his marital status, the origin of the individual, the level of education and the status of the occupation [17].

The age of the of an individual determine the use of health care services, despite the risk of unwanted pregnancy, unsafe abortion, sexual transmitted infections and pregnancy complication during young age, adolescent have limited use of health care due to limited information,

education and communication on sexual matters from health care parents, teachers and health care providers [18]. In Tanzania the risk of limited antenatal care to adolescent is reflected on the average age of 17 years of a woman to start sexual activities [3]. Study done in Ghana showed that, pregnant women below 24 years were less likely to attend health care for antenatal care by 24% compared to 46% for pregnant women who are above 25 years [19].

Pregnant women who are married have support of the husband and community in terms of income and social support [19]. Married women are 15 percentage points more likely to increase the number of ANC visits compared to unmarried pregnant mothers [19]. Also another study conducted in Nigeria showed positive significant association between marital status and optimal utilization of antenatal care among pregnant women[20].

A group with lower education has less than four number of ANC visits compared to group with high education status which has 13 percentage more likely to utilize ANC services [19]. This means education empowers women to decide for her own health, break social- cultural barrier around her community. In another study done in Kenya reported that education can be a barrier to attend at-least four ANC visits [21]. For instance woman who are illiterate cannot even read the leaflets given from the health facilities. In Tanzania the illiteracy level is high among women with 15% compared to men, so this has negative effect to the ANC visits of pregnant women [3].

Antenatal care service in Tanzania is free in public health facilities and some faith based health facilities; it does not need any payment [2]. But due to geographical location of the health facilities it requires the pregnant women to travel up to 15 km to reach health facility to receive ANC services. In a study conducted in a Kenya, the economic status of the women is considered as positive effect to the ANC visits of at least four [21]. Women who are traveling long distance to seek antenatal care have few number of antenatal care visits compared to those who are living nearby health facilities because of travelling cost [22].

Enabling barriers

These barriers includes income of the pregnant women, health insurance of pregnant mother and access to skilled providers [17]. The income of the pregnant woman enables her to attend health facilities at least four times because she can afford to hire any means of transport to reach health

facilities. In a study conducted in Nigeria, reported that the rich families were more likely to attend antenatal care by 80% compared to 40% of poor family [23]. Another study also showed that, those with high income had optimal utilization of ANC compared to those who are poor, it again revealed that those with high income received quality ANC services compared to poor group [24].

Pregnant women attending public health facilities in Tanzania are supposed to be given all services according to Tanzania health policy, but sometimes the facilities lack some medical supplies which require the pregnant women to go to private facilities to get those services, such as blood estimation and syphilis screening [3]. Those services will need pregnant women to pay cash or use health insurance to get services, pregnant women who have health insurance have more antenatal care visit than those who use cash to pay for services [25]. Another study revealed that, pregnant women with health insurance have more antenatal care visits compared to those without insurance [19].

Illness level

This is how the pregnant women fill the burden of her health condition, it can be the number of pregnancies, history of previous pregnancy and whether the pregnancy was planned or not [17].

When a woman gets pregnant for the first time, she becomes worried about her life which push her to attend health facilities for antenatal care services. Primigravidae have more visits by 15 % compared to multiparous. Also this study showed that, pregnant women who had history of pregnancy complication such as bleeding, inadequate pelvis and previous caesarean section had more visits to antenatal care [26]. This finding is also supported by the study conducted in Ghana, where it showed multigravida women had less optimal utilization of antenatal care compared to primigravidae [19].

One of the measures of preventing maternal death is family planning, when the woman controlled her birthing, it gives her ample time to prepare for the next pregnancy in terms of finance, health and even psychological aspect [27]. Study shows that, pregnant woman whose pregnancies are planned and has history of using family planning methods has a higher chance of attending more antenatal care visits compared to unplanned pregnancies [23].

2.3 Health facilities barriers

These factors are available at the health facilities which influence pregnant women to attend antenatal care services, they can be availability of medical supplies, attitude of health care providers, accessibility of the facility and time spent to receive the care in the facility.

The delivery of antenatal care services to pregnant women at antenatal care clinics are supposed to be equal to all health facilities providing the services [2]. But the services varied widely among the facilities, some of the services are given to all pregnant women such as gestation age estimation and abdominal examination, but some are not given to all pregnant women such as blood hemoglobin estimation and syphilis test [3]. Also 51% women who received ANC for their most recent birth had blood pressure measured, 87% had a blood sample taken for either malaria test, syphilis test, HIV test, blood grouping and cross-matching, or hemoglobin check, and 60% had a urine sample taken and 63% took intestinal parasite drugs [3]. Factors influencing the provision of services are poor implementation of the Focused Antenatal Care guidelines among health facilities, lack of trained staff and absenteeism, shortages of medical supplies, these disparities of services influence pregnant women attendances to health facilities [28].

There are elements which affect women positively to attend health facility for ANC; testing for disease including HIV, checking the position of the foetus, and receiving injections and/ or medications. Receiving a bed net and obtaining a registration card were also valuable [16]. Another study conducted in Kilombero, Tanzania reported factors positively associated with ANC 4 visits utilization, which include among others; higher quality of services, testing and counselling for HIV during ANC and receiving two or more doses of SP (Sulphadoxine Pyrimethamine)/Fansidar for preventing malaria during antenatal care [13].

Health care providers have influence of the number of antenatal care visits a pregnant women make. When the providers have bad attitude such as bad language or poor costumer care it decreases the number of visits to pregnant women, the women become scared of bad behaviour of providers [29].

The shortage of skilled providers and inadequate facility infrastructure affect time spent by pregnant women to receive health care. In Tanzania there is a shortage of skilled staff by 56%

[30]. The study conducted in Zimbabwe reported that, pregnant women were facing delaying in receiving service which leads to use more money for lunch and may even cause problem to the children left home [31].

2.4 Community barriers:

The community factors affect the continuous utilization on antenatal care services to pregnant women. A study conducted in Nigeria reported that, 24% of the interviewed pregnant women mention husband disapproval as one of the reason of not attending antenatal clinic while cultural and belief account to 12% of those who did not attend antenatal clinic [32]. This is similar to study conducted in Sudan, which revealed that, husband were responsible for deciding when and where pregnant women will attend antenatal care [33].

Another study revealed that, elder approval or parent approval of antenatal care clinic delays in seeking and reaching health care and hence decrease number of antenatal care visits [34]. Study conducted in Sudan revealed that utilization of ANC was more likely to happen in urban pregnant women for 87.6% compared to rural pregnant women 74.3% [35]. In Tanzania 64% of urban pregnant women attends four or more antenatal clinic compared to 45% of rural pregnant women. [3].

Some communities in Kenya viewed antenatal period as a natural phenomenon which does not need medical attention or modern medicine as the God is the one who determine their survival[21]. Pregnant women are required to be exempted from heavy duties of the family to enable her time to rest and to seek medical care such as antenatal care services. They engage in non-remunerable activities which do not provide direct income to the family, this also act as a barrier for pregnant women to get income for health care. They are not alleviated their house works by neither husband nor other family members[36].

Gender roles is another barrier to the utilization of health care to a pregnant woman, in some areas, husband is the one who decide for his family, he decide what to eat, what to wear, where to go, where to attend for health care and when to attend health care. Despite the roles of the husband in the family the knowledge of pregnancy complications is still low [33].

Knowledge Gap

Many reviewed literature have established the barriers for optimal utilization of antenatal care services among pregnant women, but few were able to go deeper to the root cause of the problem by interviewing a combination of key people involved in the provision of ANC services such as facility in-charges, CHWs and pregnant women. Furthermore, there is no qualitative studies that have been done in Tarime district exploring factors for low utilization of ANC. This study has filled this gap by interviewing the in-charges of the facility, pregnant women and community health workers (CHW) in Tarime district. These CHWs are the health worker volunteers working in the community by visiting pregnant women in their families to provide health education

CHAPTER THREE

MATERIALS AND METHODS

3.0 Introduction

This chapter presents the study area and explains about the research design, sample size and sampling techniques. It also describes data collection techniques/methods, data collection processes and the data analysis plan.

3.1 Description of the study area

Study was conducted in Tarime District situated in the North-West of Tanzania, lies between latitudes $1^0.00^{"}$ - $1^{0.}45^{"}$ S and longitudes $33^030^{'}$ – 35^0 00' E, with a total area of 1,636.9 km^2. The District boarded by Kenya (Trans-Mara and Kurya District) to the North, Serengeti District to the East Rorya District to the west and Musoma District to the south. About 270 km^2 of its area covered by Serengeti National Park (Lamai Area). The district comprised of 4 divisions, 26 wards, and 88 villages with 469 hamlets. It has a total population of 490,925, among them women of child bearing age are 137,459. It has 29 health facilities, among them, 9 are health centers and the rest are dispensaries, and 25 among them are owned by government.

3.2 Study design

A cross sectional explorative study design was employed to explore the barriers contributing to non-optimal use of ANC among pregnant women in Tarime District in Mara Region. Cross sectional explorative study design was useful in this study because it gathered information on lived experiences of barriers to use of ANC services to at least four visits among pregnant women.

3.3 Study population

The study population of this study were multigravida pregnant women attending ANC in both public and non -public facilities, community health workers and health facility in-charges from Tarime district. The participants were equally selected from two health facilities from rural areas and two health facilities from semi-urban areas. Community health workers were those providing services in the selected health facilities, health facility in-charges were those from health facilities selected and pregnant women were those attended ANC from those selected health facilities during the day of data collection.

3.4 Study sample size

A total of 8 pregnant women (PW) were selected for in-depth interviews (IDIs) from four health facilities, 4 PW from two rural health facilities and 4 PW from semi-urban health facilities. Again 8 pregnant women were selected from each facility for focus group discussions (FGD), therefore a total of 32 PW were involved in FGDs, 16 from two rural facilities and 16 from two semi-urban facilities. Four community health workers were selected for IDIs, 2 from two semi-urban facilities and 2 from rural health facilities. In addition, 4 health facility in-charges were selected for IDIs, two from two semi-urban facilities and two from rural health facilities.

3.5 Sampling Techniques.

A quota sampling technique was used to select four health facilities, two from semi-urban health facilities and two from rural health facilities. This technique was used to make sure the pregnant women from two geographical areas are equally represented in the study.

A purpose sampling technique was used to select study participants, pregnant women, community health workers and facility in-charges. A total of 8 multiparous pregnant women from four health facilities were selected (two from each selected health facilities). Another 32 pregnant women were selected to participate in FGDs, 8 PWs from each health facilities. Four CHWs were selected for IDIs, one from each health facility. Lastly, 4 health facilities in-charges, one from each facility were selected.

3.6 Data collection instruments and methods

FGD and IDI guide were developed to guide the FGDs and IDIs respectively. It contained open ended questions about community, individual and facility barriers contributing to low use of ANC services in the study area. For FGD, the questions covered community barriers and were responded by pregnant women covered. IDIs guide for health facility in-charge covered questions on health facility barriers while IDIs for pregnant women covered question on individual barriers and IDIs for community health worker (CHW) covered question on individual and community barriers

Data collection methods

FGDs were used because were useful to obtain detailed information about personal and group feelings, perceptions and opinions on barriers for optimal ANC use among pregnant women in Tarime Dc. IDIs had much more opportunity to ask follow-up questions, probe for additional information, and circle back to key questions later on in the interview to generate a rich understanding of attitudes, perceptions and motivations.

FGDs and IDIs methods were used to collect data from community health workers, pregnant women and health facility in-charges. A total of four focus group discussions were conducted to 32 pregnant women, 8 pregnant women per one focus group discussion. In-depth interview were conducted to 16 participants, 8 pregnant women, 4 community health workers and 4 health facility in-charges.

3.7 Data Collection Procedure.

The principal investigator and two research assistants collected data from pregnant women. In the field researchers introduced themselves to the study participants, and they informed participants about the aim of the study. Participants were asked for their consent before participated in the focus group discussion or in depth interview. Principal investigator was responsible in moderating both FGDs and IDI, after finished the FGD or IDI the principal investigator concluded the discussion by thanking the participants. All data were collected by tape recorder

3.8 Data analysis

For a PI to make sense of the data and make them understandable, 2 to 3 IDIs were conducted per day. The research assistants expanded the notes immediately after the interviews then the notes were typed in the computer. The PI listened the recorded interviews on audiotapes while at the field on waiting for the next interview. At the end of day, in the evening before departing to our respective residence, the PI and the research assistants sat for debriefing meeting. Before starting with transcription all the audio records were uploaded and stored in the computer and the files were named in a confidential manner. Transcribing started by typing everything said in the interviews simultaneously while listening to the recorded voices. In order to ensure the accuracy of the data, verbatim transcriptions were done by the PI and the research assistant. All the interviews were conducted in Kiswahili; hence the PI and the research assistant translated all the transcripts to English then checked for errors. Interview transcripts were read one by one as the study continues in order to identify follow-up questions or probes for next interview and decide whether saturation had been reached.

The thematic analysis was employed to analyse data; which involved the reformulation of stories presented by respondents taking into account context of each case and different experiences of each respondent.

After familiarization with the audio tapes and notes, then codes were generated, searched for themes in the data then followed by reviewing themes, defining, naming themes and the last was report writing.

3.9 Ethical considerations

Ethical clearance was obtained from Muhimbili University of Health and Alliance Sciences (MUHAS) Research ethical committee. Mara Regional and Tarime district administration were asked for permission to conduct this study. Also participants were asked for consents prior to recruitments. Thereafter study participants were briefed on the study objectives. Informed consent was obtained from each study participant, and then each participant was requested to sign informed consent form after agreeing to participate in the study. Moreover, to ensure quality data collection, professional relationship such as privacy and confidentiality with

participants were maintained. Participants were free to give out their opinions, ideas and even to withdraw from the study at any time without any penalty.

Study limitations

The study was prone to investigator bias: This was because of the researchers' believes and assumptions about the problem under investigation. To mitigate investigator bias triangulation was used, which involve the use of different data collection methods, collecting data from different study participants (CHWs, PWs, and facility in-charges) and different health care facilities with different characteristics (rural and semi-urban).

The results of this study are not generalizable: This is because of the nature of qualitative study which was not meant to generalize findings but it was intended to get an in-depth understanding of the phenomenon under investigation. Although the results of this study is not generalizable, but it can go beyond the study area (be transferable) with similar situations, similar populations, and similar phenomena. For this to be done detailed background data to establish context of study and detailed description of phenomenon in question was provided.

3.10 Ensuring trustworthiness of the Qualitative study

The main issue in qualitative study is how to ensure trustworthiness of the study. Guba (1981) suggest four concepts which are used to ensure trustworthiness in qualitative studies. He suggests use of *credibility* (in preference to internal validity); *transferability* (in preference to external validity/generalizability); *dependability* (in preference to reliability); and *confirmability* (in preference to objectivity).

Credibility: In this study triangulation of data collection methods was used to collect information from study participants, namely in-depth interview and focus group discussion. Different types of participants (pregnant women, CHW and health care providers) were included in the study and data was collected from different health care facilities with different characteristics such as different location, rural and semi-urban areas so as to have findings with reality.

Transferability: A detailed background data that establish context of study and detailed description of phenomenon in question has been done. The information included the number of health care facilities took part in this study, criteria of selected study participants, the number of participants that were involved in this study, number of focus group discussion conducted, the data collection methods that were employed, the number of the in-depth interview sessions, and the time period over which the data was collected. This is to have findings which can be applied in another situation

Dependability: In order for this study to be dependable and been able to be repeated detailed methodological descriptions such as study area, study population, sample size, data collection tools/methods, number of participants, data analysis approach of the study were done to enable future researcher to repeat the work.

Confirmability: In order for this study to be confirmable triangulation was used to reduce effect of investigator bias. Triangulation involved two methods of data collection which were focus group discussions and in-depth interview. Triangulation of participants included pregnant women, health facility in-charges and community health workers and triangulation of study sites which were two health facilities from rural areas and two from semi-urban areas.

CHAPTER FOUR

RESULTS

4.0 Introduction

Qualitative data were collected from 16 in-depth interviews and 4 focus group discussions with aim of exploring barriers for optimal utilization of antenatal care among pregnant in Tarime district. In-depth interviews were conducted to health facilities in-charges, community health workers and pregnant women. Focus group discussions were conducted to pregnant women. This section is divided into four subsections. First subsection presents informant demographic information, second subsection presents the community barriers for optimal ANC utilization, third subsection presents facility barriers for optimal use of ANC services and the last will present individual barriers for optimal use of ANC services among pregnant women in Tarime District.

4.1 Informants' demographic information

Total of four facility's in-charges, four community health workers (CHW) and eight pregnant women (PW) were recruited for the in-depth interview according to criteria set of multi gravidae pregnant women attending health facilities for antenatal care clinic at the day of data collection. Facility in charges of four purposeful selected facilities according to geographical location of rural and semi-urban were also involved in the study and community health workers providing services in the catchment areas of the selected health facilities.

The age of the facility in-charges interviewed were ranging from 25-34 years, with secondary education level of form four, 75% were female and 25% male. Community health workers (2 male and 2 female) interviewed age ranged from 40-46 years, all with primary level of education (standard seven). Out of 4 interviewed CHWs, 50% were peasant and were from rural, one tailor and one shopkeeper. A total of 8 Pregnant women (4 from rural and 4 from semi-urban areas) were recruited with age ranging from 23-36 years, majority of them were standard seven (5) whereas 3 of them have form four level of secondary education, 5 were housewives and 2 were peasants while one was businesswoman.

Four focus group discussions were conducted to 32 multigravida pregnant women (16 from rural and 16 from semi-urban areas) from four health facilities previously selected, two from rural and two from semi-rural areas. 28% were recruited with age ranging from 21-25, 47% were recruited with age ranging from 26-30 and 25% were ranging from 31-35 year old. Majority were having standard seven primary education, 86% and the rest were having form four secondary level. All those with secondary education level were coming from semi-urban areas.

4.2 Community barriers

These are barriers which are shared by the group of people who are living in the same geographical area and share the same culture and norms. Upon analysis three themes were generated under this subsection, namely perception of ANC and myth about ANC.

Awareness of ANC in the community

Awareness of the antenatal care among community particularly men appeared to be one of the barriers contributing few number of antenatal care visits among pregnant women. During in-depth interview with community health workers, and focus group discussions with pregnant women it appeared community particularly men had poor awareness towards antenatal care clinic, they are busy with their economic activities, claiming that attending ANC is the role of pregnant women. The roles of men are to impregnate his wife and providing food to his family. The following were informant' s words:

…. *" some men are rude to their wives when it comes the issue of attending antenatal care, they may say, their task was to impregnate and wait for children, what left is for women to attend clinic.". (CHW1-semi-urban area)*

Another CHW had this to say

"Men have no good awareness towards antenatal care, they only go to ANC when their wives are denied ANC services for failing to bring their male partners to the clinic. (CHW4-rural area)"

This kind of perception cause pregnant women to delay to start antenatal care at early pregnancy stage as recommended by national guideline for antenatal care which need pregnant women to start ANC at gestation below 12 weeks.

Pregnant women had these to say during focus group discussion:

Some women has low awareness of ANC, they think pregnancy is normal things which does not need any medical intervention, they have been delivering at home (PW at focus group discussion)

"Women are engaged in many domestic activities such cattle rearing and cultivation of domestic crops which hinder the attendance of ANC, they may ask their husband permission to go to clinic but husband insist on completing the given activities" (PW at FGD)

Myths in the community about ANC

From in-depth interviews and focus group discussions, it was revealed that, community belief and culture act as barriers for the utilization of ANC. Pregnant women do not want to reveal their pregnancy at early stage to avoid misfortune of their pregnancy, which in turn delay to start ANC.

Also some elder women from the community discourage antenatal care clinic as it is for the weak women. Strong women are not attending ANC and are delivering at home. Informant said:

"I want my pregnancy to become big enough before exposing it to the public including going to the clinic so that I cannot be bewitched by my co-wives". (CHW1)

Another CHW remarked that,

"During our age women didn't attend ANC because they believed that they were strong, so if you go to ANC you are weak and you will not receive respect from our community". (CHW1-semi-urban area)

Other interviewed study participants had poor beliefs that the medicines they receive from the clinics may harm their pregnancies and therefore lose their babies. One of the interviewed study participants said the following:

"The medicines which you receive from ANC are not good to you and to your baby, especially those which are used to increase blood since you will bleed more during delivery". (CHW2-rural area)

In addition, another respondents had this to say:

"I have my aunt who have never attended ANC for her six children because of the belief that vaccination and supplements provided at the facility are bad to her health". (CHW2-rural area)

"There is no need to attend many ANC visits, it is tiresome job to have many visits that is why we delay to start ANC booking. It is good start at 7 to 8 months so that I can have only 1 visit" (PW from FDG-rural).

4.3 Health facility barriers

The interviewed Health facility in-charges produced the following themes after the analysis of their information: Facility accessibilities, availability of skilled health care providers, and availability of essential medical supplies.

Facility accessibility

The interviewed health facility in-charges reported that pregnant women are required to attend ANC at least four visits, with the early booking at 12 weeks of gestation age. When the facility is not close to their homes it requires pregnant women to travel to seek the ANC services. Traveling to a health facility will depend on availability of passable roads and availability of money to pay for transport. If one of them is missing the pregnant women will not have optimal number of ANC visits. Respondents had this to say:

"Distance to health facility is among the barrier we have in our community, some of us are coming from far villages which may require to use boda boda to reach health facility, or if you walk you may take up to 4 hours" (PW at FDG rural area).

Another respondent said:

"We have villages which are far from the facility, we are required to conduct community outreach to those villages but some time we failed due to shortage of staff and lack of transport". (Health facility in-charge3 from semi-urban)

Availability of essential medicines/reagents

Three health facility in-charges out of four interviewed reported to have non-optimal use of antenatal care service to pregnant women when the commodities at the facility are out of stock. They said when pregnant women come to health facility they expect to receive supplement and screening of different conditions in the first visits together with their partners but when they were not screened they become discouraged of the ANC services.

"When the facility has SP and FEFO the number of pregnant women came for ANC services are many compared to when we have out of stock of these medicines". (Health facility in-charge3 from rural facility)

Another health facility in-charge said:

"When a pregnant woman comes for ANC and unfortunately she missed medicine in her first and second visits, she will not come again, and maybe she will go to another health facilities, though we are not sure of that" (Health facility in-charge1 from semi-urban)

Availability of skilled staff

Facility in-charges responded that, availability of skilled staff in the health facilities especially in the antenatal care department contributes to optimal utilization of antenatal care services. When facility has shortage of staff it means pregnant women will have long waiting time to receive the services which eventually will delay pregnant women to go back home to do her domestic works. Therefore, this situation may in turn contribute to non-optimal use of ANC. Also when the service provider provides quality ANC services it contributes to optimal use of the services. Health facility in-charges reported that:

"Shortage of staff contribute to low ANC visits, pregnant mother may come early around 8:00AM in the health facility, and then receive services around 2:00PM. Therefore next visit she will not come because of delay in the first visits" (Health facility in-charge 3 from rural).

Another one said:

"Because we serve many pregnant women, the only one available nurse will not be able to provide quality ANC services such as health education, screening and counselling, therefore pregnant women will not attend ANC clinic until they are sure there are at least two nurses to provide services". (Health facility in-charge 4-from semi-urban)

One of the FGD members reported that:

..."Nurses took our blood but she did not tell us for what purposes, it discourages us to continue with antenatal care visits as we know nothing about our health status". (FGD 1; from semi-urban)

Another said that:

There is no health education in this facility, since morning when we came, no one has provided health education to us, and this is the routine to this facility. It discourage us together with our partners (spouse) (FDG3 from rural).

4.4 Individual barriers

Pregnant women and community health workers were interviewed on the individual barriers contributing to optimal use of antenatal care services. Upon analysis of the responses the following themes were observed: number of parity, age of the pregnant women, education level of pregnant women, marital status, economic status of the pregnant women and presence of risk factors during pregnancy and history of pregnancy complication.

Economic status

From in-depth interview and focus group discussion, pregnant women agreed the services from government facility are free. However, to reach health facility there are some cost which must be incurred. The cost of transport is among the barriers for optimal use of ANC service, some of the

village are far from the facilities and necessitate pregnant women to pay up to Tsh 10,000/- for a return ticket. Another cost which was emerged during discussion with pregnant women was pregnant attire. For a pregnant woman to attend ANC she needs to have nice maternity gown, khanga and shoes. She will not be allowed by health care providers to wear skirt and blouse. Our study informants reported that women whose economic status are low have non-optimal use of ANC, but those with good economic power such as those with employment have optimal ANC use. For example one informant from FGD said this and got support from others:

"I cannot come to a health facility wearing old clothes because all pregnant women here are wearing nice clothes, they will laugh at me". (FGD 3 from rural)

Another informant from in-depth interview said that: *those with low economic status will not come to a clinic because they do not have required clothes, also they will compare, instead of buying new clothes they will buy food to eat with their children. (PW 8 from rural)*

Age of the pregnant women

According to the data collected from in-depth interview with community health workers and pregnant women, majority agreed that, those who are older have non-optimal use ANC services in their communities compared with those with young age. The reasons explained were feeling shy, bad attitude from the nurse and negligence from older group. The pregnant woman said:

"They (older pregnant women) cannot attend antenatal care clinic for their pregnancies because they already have daughters which also attend antenatal clinic" (PW6 from semi-urban).

Another pregnant woman had this to say:

"I have enough experience of pregnancy due to my age, I know I will deliver normally, I started ANC when pregnancy was at 7 months of gestation age so that I can attend only two twice before I deliver" (IDI PW4-from rural).

Another respondent who is community health worker said:

"If I go to ANC at this old age, nurses will start to insult me in front of all pregnant women attended ANC clinic". (IDI CHW4 from semi-urban).

Education level of the pregnant women

Pregnant women (PW) and community health workers interviewed reported that level of education also affect utilization of ANC in Tarime District. Pregnant women who are able to read have optimal use of ANC because they can read and understand contents of banners on the walls of RCH and leaflets provided during first ANC visit. One of our informants said:

"Attending school help pregnant women to understand the importance of attending antenatal clinic since school syllabus have topic of reproduction" (Health facility in-charge1 from semi-urban)

Another informant from IDIs said:

..."pregnant women who attended secondary school have better understandings of ANC, because majority (those which have not attended secondary school) have low understanding on ANC. Those with secondary education know when they are pregnant and they start ANC early but those with low education level they don't know when they have pregnancy until they ask their friends the meaning of missing menses and other body changes or waiting for pregnancy to be big enough.. Therefore, they delay to start ANC clinic". (CHW3 from rural)

Marital status

When pregnant women start their first ANC visits, they are advised to be accompanied by their partners for them to be screened for HIV and syphilis, also to get health information regarding their coming baby. Many informants reported that, those pregnant women who are married have more optimal antenatal visits compared to non-married pregnant women. The reason for married to have more optimal use was because facility wants all pregnant women to bring their partners to ANC which can be done only by married couple compared to adolescents and widow who are pregnant.

One of the key Informants said:

"In our community, adolescent to get pregnancy out of marriage is not normal, therefore she will try to hide until the pregnancy is big. When she starts first booking for ANC the pregnancy may be more than 28 weeks which will be difficult to complete four visits". (CHW1-semi urban)

Another had reported that:

"Adolescent and widow are delaying to start ANC because they do not know who impregnated them. Therefore, they cannot start ANC early". (CHW3 from rural)

Number of parity

Three CHW out of four and all health facility in-charges, reported that, those with single parity have more optimal use of ANC compared to those with many parity due to the experiences of pregnancy among the two groups. Those with single parity want to know more about their health status and their coming baby, so they will start their ANC booking early. One of interviewed pregnant women said:

"I have many children and I have experience on pregnancy, so there is no new things I will benefit, so I will wait until the pregnancy is big enough so as I can attend only twice till I deliver". (IDI PW7 from rural)

Similarly, the community health worker said:

"Those pregnant women with no parity have ideal ANC utilization because they want assurance that their pregnancy and their babies are safe". They can have 5-6 ANC visits. (CHW2 from rural area)

Presence of risk factor/history of complication

Interviewed pregnant women, CHWs and facility in-charges reported that pregnant women with history of complication have more number of antenatal visits compared to those with no history of complication. Only one reported to have no difference among the two groups. They reported that:

"Those women with previous history of pregnancy complications will have more ANC visits because they will not want to have another complication during the current pregnant". (*CHW4 from semi-urban area*)

Health facility in-charges responded that:

..."They usually start ANC very early once they feel they are pregnant, therefore they will attend all four visits required". (Health facility in-charge2-from rural area)

Another said that:

"I once served one client with history of complication, she was cooperative, even if I ask her to return after two weeks, she will come". (Health facility in-charge3 from rural area)

According to the interview conducted, pregnant women with risk factors have more antenatal visits compared to those with no risk factors. This was explained that, pregnant women with risk factors will have frequent ANC visits to know their health status together with their babies. They said:

….."*today I attended the pregnant women who had high blood pressure in her previous visit, she came early for check-up before the date to return"*. (*Health facility in-charge*3 from rural area)

CHAPTER 5

DISCUSSION

5.0 Introduction

This chapter discuss the key findings from the data collected from in-depth interview of facility in-charges, community health workers and pregnant women as well as focus group discussion with pregnant women. The discussion is based in three key areas which affect optimal utilization of antenatal care services among pregnant women in Tarime District, namely community barriers, health facility barriers and individual barriers.

5.1 Community barriers for optimal use of ANC services in Tarime District

This study identified community barriers for optimal use of antenatal care services among pregnant women in Tarime District as; low ANC awareness among community members and myths toward use of ANC services.

The low awareness of ANC among community members contribute to low number of ANC visits among pregnant women. Due to low awareness pregnant women were not exempted from family duties such as cattle rearing and cultivation which then act as barriers for them to attend clinic timely. They were not getting permission from their husband until they finish their task. Pregnant women were supposed to be exempted from heavy domestic activities so as to have enough time to attend clinic. Similar findings were reported in Nigeria indicating that, women were not having independent decision to find the required antenatal care services because of low awareness of ANC among men [33]. Also another study showed that, pregnant women were doing more work than their husband which act as the barrier for them to have required ANC visits [36].

This study revealed the presence of myths in the community act as the barrier for ideal utilization of antenatal care services among pregnant women in Tarime DC. When pregnant women are not allowed to talk about or reveal her pregnancy at early stages is barrier for utilization of health care. Similar results were reported in a study conducted in Uganda which showed that pregnant women were not allowed to plan for early pregnancy, and therefore they cannot attend ANC as early as required [29]. Another study had the same finding of not allowing pregnant women to

reveal their pregnancy at early stages to the community because they will lose the pregnancy [37].

5.2 Health facility barriers for optimal use of ANC services in Tarime District

This study reported several barriers from the facility which affect ideal use of antenatal care services among pregnant women; availability of essential medical supplies, shortage of skilled health care providers and the accessibility of the facilities by pregnant women.

This study reported availability of essential medical supplies as important barrier to the optimal use of ANC services. When the facilities are out of stock of SP, medical supplementations and reagents for testing HIV and syphilis it discourages pregnant women to continue to use the service, thus affect the number of ANC visits among pregnant women. The study is supported by another study conducted in Kilombero whereby facilities were missing important supplies in the RCH which forced pregnant women to buy those supplies from the pharmacy [16]. Also another study had similar findings that the availability of essential commodities such as SP and HIV testing were affecting positively utilization of ANC.

Quality is affected by the shortage of skilled staff in the facility. This study revealed that, shortage of staff is one of the contributing barriers for ideal use of ANC services among pregnant women by causing the waiting time to receive service to be as long as 5-7 hours. Also due to shortage of staff, health care providers available were not providing all services to clients as time will not be enough. This is similar to the study conducted in South Africa where pregnant women were discouraged to utilize ANC services due to shortage of staff which lead to long waiting time [38]. The provision of services of antenatal care was reported to be affected by quality of services provided by health care providers who are overwhelmed with heavy workload [38]. In Tanzania the quality RCH services is supposed to be provided by skilled health care providers with minimum education level of certificate [30]. However, still many health facilities have unskilled health care providers providing the RCH services including the antenatal service which hinder pregnant women to have continues ANC services. This result is supported by the study conducted in Zimbabwe which showed that pregnant women were not receiving quality ANC services such as health information, counsel about birth preparedness and importance of facility delivery because service providers were few and burdened with heavy workload [31].

5.3 Individual barriers for optimal use of ANC services in Tarime District

Individual barriers identified from this study were education level of the pregnant woman, number of parity for pregnant woman, age of the pregnant woman, presence or absence of risk factors during current pregnancy, history of pregnancy complication and economic status of the pregnant woman.

This study revealed that, pregnant woman who can read and write have more number of ANC visits because they can easily understand the health promotion messages provided in various communication channels such as posters and fliers compared to those with no education. Majority of the interviewed pregnant women were standard seven which reported that those which have not attended even primary education are even worse in attending the clinic. This is similar to the studies conducted in Uganda, Nigeria and Indonesia which all studies reported that level of education have positive impact to the optimal utilization of antenatal care [20, 24, 34]. This finding is contrary to other study which showed no association between level of education and optimal use of antenatal care among pregnant women [39].

Availability of risk factors in the current pregnancy or the presence of history of complication in the previous pregnancy reported to affect the utilization of antenatal care services in Tarime DC. Those groups have more optimal use of ANC compared to those with no risk or history of complication. Those pregnant women they tend to use ANC more so that they are sure of their health status together with their babies. The study is supported by another study which revealed the ideal use of ANC service to pregnant women with risk factors or history of complication [24]. These group are attending ANC to make sure they are both safe. This study also reported that, Primigravidae have more optimal utilization of antenatal care services compared to multigravida. Such findings are also supported by the other studies where they reported to have more antenatal visits to primigravidae [26, 34]. Those pregnant women with first pregnancy have no experience on that matter, so they attend ANC to know their health status, and to know the development of their babies. This is contrary to other study which revealed that, multiparous pregnant women had more antenatal care compared to primigravidae [34].

The study reported pregnant women who are married to have more optimal utilization of ANC compared to non-married pregnant women. This is because even when they are forced to come

with their male partners, it is easy for them to do so compared to non-married pregnant women. This is similar to studies conducted in South Africa and in Nigeria which reported significant presence of optimal ANC use among married pregnant women [20, 38]. For pregnant women who are not married are required to bring letter from village leaders identifying them to have no husband for them to get services otherwise they will go home unattended. Also those who come with their partner receive service early irrespective of the time for reaching the facility.

Also this study revealed pregnant women who are older to have minimal utilization of antenatal care services. Findings from this study are similar to a study conducted in Rwanda, which showed lower number of antenatal care visits among older group of pregnant women [39]. However, our findings are contrary to a study done in South Africa where pregnant women with older age have more visits of antenatal care clinic [38]. In Tarime it was revealed those optimal use of ANC to younger age was because of curiosity and inexperience while the older age was because of experience, bad attitude of health care providers towards them and shyness of attending ANC while they have daughter who may have pregnancy.

The study revealed the economic status of the pregnant women to affect utilization of antenatal care in Tarime district, those with high economic status have more optimal use of ANC because they can get all important requirements such as good clothes as well as bus fares to the health facility. The study is similar to the studies conducted in Uganda and in Zimbabwe where pregnant with high economic status have more optimal utilization of ANC [29, 31]. In Tanzania the services for ANC in government facilities is free but there are other costs involved such as transport, food while away for ANC service and for maternity clothes. Also this study reported that, accessibility of the facility affects the use of ANC. Those who are living in walking distance to health facilities have more optimal use of ANC because the cost of transport is high to those living far from facility. Also there is no public transport since in some of the villages due to lack of passable roads, so they use motorcycle *(boda boda)* which is more expensive compared to public transport. This is supported by the studies conducted in Zimbabwe and Nigeria where pregnant women living far from health facilities were having non-optimal utilization of antenatal care [20, 31].

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion.

The sub-optimal level of utilization is attributed by individual, community and health facility barriers which need attention from the government and partners working to improve RCH services. The identified barriers in a community were lack of awareness of community toward ANC and myths in the community regarding ANC; health facility barriers were shortage of staff which may end up to poor service delivery, shortage of essential medical supplies and lack of accessibility of the health facilities to some of the pregnant women; individual barriers were older age of pregnant women, many parities of the pregnant women, unmarried pregnant women, uneducated pregnant women and low economic level of pregnant women, absence of risk factors or history of pregnancy were revealed to affect optimal utilization of antenatal care.

6.2 Recommendations

- Community health workers should provide health education on antenatal care to the community and it should involve different groups such as elderly women, traditional leaders and youth.
- Health facility in-charges should make sure essential medical supplies are available in advances to avoid service break down due to stock out.
- Routine community outreach should be conducted by nearby health facilities to the areas where the facility is far for pregnant women to reach the service regularly.
- Health Facility Management should ensure that the ANC services are not discriminative, married and non-married should all have the same right.
- Health facility in-charges should make sure health education is provided at the facility at the beginning of service provision, and it should be routine and follow schedule developed.

Recommendations for future studies

This study was done in Tarime district only, I recommend next time to be conducted in more than one district since Mara region has many districts with various tribes and therefore different culture, norms and beliefs. Also this study involved pregnant women, CHW and health care facility in-charges, I recommend next study to include more study population including district health management team and men.

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Appendices

7. 0 Appendix I. INTERVIEW GUIDELINE

INTERVIEW GUIDE FOR PREGNANT WOMEN.

INDIVIDUAL BARRIERS

1. How the predisposing factors affecting the continuous utilization of antenatal care

a. Probe about how age affects optimal utilization of ANC services

b. Probe about how marital status influences required number of attendances of pregnant women to the antenatal care

c. Probe about how education status of pregnant women influences optimal attendances to health facilities for antenatal care

d. Probe about how occupation status is a barrier to the utilization of ANC services

2. What Enabling barriers affecting the pregnant women in your community in seeking and receiving optimal antenatal care?

a. Probe about how income of pregnant women affects ideal utilization of ANC in your area.

b. Probe about difference of ANC use between pregnant women with health insurance and those with no health insurance.

3. How the illness level affect ideal utilization of antenatal care

a. Probe about how number of Parity affects ideal utilization of ANC services

b. Probe about history of pregnancy complication during previous pregnancy and how it affects ideal utilization of ANC services.

c. Probe about the difference among planned pregnancy against unplanned pregnancy and how it affects the optimal utilization of ANC services.

d. Probe about high risk pregnancy during antenatal care have effect on the number of visits to the utilization of antenatal care services.

INTERVIEW GUIDE FOR HEALTH FACILITY IN-CHARGE

I would like to start by asking a few questions about demographic characteristics.

a. How old are you?

b. What's the level of your education?

c. What do you do for living?

What are the facility barriers affecting optimal utilization of antenatal care?

1. Probe about how infrastructure of the health facility affect optimal utilization of ANC services among pregnant women.

2. Probe about how availability or non-availability of reagents and medicine in the health facility affect optimal utilization of ANC services to a pregnant women.

3. Probe about how attitude of health care providers affect optimal utilization of ANC services.

4. Probe about how health facility is accessible to all pregnant women in your catchment area.

5. Probe about how shortage of skilled service providers affect optimal utilization of ANC services.

6. How the illness level affect optimal utilization of antenatal care

a. Probe about number of Parity affecting optimal utilization of ANC services

b. Probe about history of pregnancy complication during previous pregnancy affect optimal utilization of ANC services.

c. Probe about the difference among planned pregnancy against unplanned pregnancy to the optimal utilization of ANC services.

d. Probe about high risk pregnancy during antenatal care have effect on the optimal utilization of antenatal care services.

INTERVIEW GUIDE FOR CHWS

I would like to start by asking a few questions about demographic characteristics.

a. How old are you?

b. What's the level of your education?

c. What do you do for living?

Part I. COMMUNITY BARRIERS

4. What are outcomes of the pregnancy to pregnant women receiving optimal antenatal care?

5. What are the obstacles pregnant women in your community face in seeking and receiving care?

a. Probe about transport related problems

b. probe about who make decisions when a pregnant women seeks healthcare services

c. probe if elderly women are the decision maker regarding pregnant women health-

d. Probe about existence of myth about delivering at home Traditional practices including a preference for birthing at home under the supervision of a traditional birth attendant

e. Probe about husband's perception about ANC and how such perception may influence pregnant women's visit to facility for ANC services

f. Probe about how women's engagement in non-income activities may affect their decisions in healthcare seeking

PART II. INDIVIDUAL BARRIERS

6. How the predisposing factors affecting the optimal utilization of antenatal care

e. Probe about how age effect on the optimal utilization of ANC services

f. Probe about how marital status influences ideal attendance of pregnant women to the antenatal care

g. Probe about how education status of pregnant women influence ideal attendance to health facilities for antenatal care

h. Probe about how occupation status is barriers to the ideal utilization of ANC services

7. What Enabling barriers affecting the pregnant women in your community in seeking and receiving ideal antenatal care?

c. Probe about how income of pregnant women it affect ideal utilization of ANC in your area.

d. Probe about difference of ANC use between pregnant women with health insurance and those with no health insurance.

8. How the illness level affect optimal utilization of antenatal care

e. Probe about how number of Parity affecting optimal utilization of ANC services

f. Probe about how history of pregnancy complication during previous pregnancy affect optimal utilization of ANC services.

g. Probe about the difference among planned pregnancy against unplanned pregnancy to the optimal utilization of ANC services.

h. Probe about how high risk pregnancy during antenatal care have effect on the optimal utilization of antenatal care services.

FGDs Guide

COMMUNITY BARRIERS (for pregnant women)

1. Is the antenatal care have any effect to the outcome of the pregnancy?

2. What are the obstacles pregnant women in your community face in seeking and receiving optimal antenatal care?

a. Probe about transport related problems

b. probe about who make decisions when a pregnant women seeks healthcare services

c. probe if elderly women are the decision maker regarding pregnant women health

d. Probe about existence of myth about delivering at home Traditional practices including a preference for birthing at home under the supervision of a traditional birth attendant

e. Probe about husband's perception about ANC and how such perception may influence pregnant women's visit to facility for ANC services

f. Probe about how women's engagement in non-income activities may affect their decisions in healthcare seeking behaviour

7.1. Appendix II : Consent Form English Version

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES(MUHAS) DIRECTORATE OF RESEARCH AND PUBLICATIONS.

Study on Barriers for optimal use of antenatal care in Tarime District, Mara, Tanzania

Dear sir/madam

You are hereby invited to participate in a study conducted by Godlisten Martin who is a student at Muhimbili University of Health and Allied Sciences. Godlisten Martin is conducting this study for his Masters Dissertation.

Your participation in this study is entirely voluntary. You should read the information below and ask questions about anything you do not understand, before deciding whether or not to participate in the study. You are being asked to participate in this study because you are among the employees working in non- profit and profit organization in Dar es Salam

Purpose of the study

The purpose of this study is to explore factors that influence medical doctors to move from clinical practice in the public sector to non-clinical practice in the private sector .We hope to use all the information from this study to identify the factors (push and pull) that influence medical doctors to move to private sectors. You will be informed of the findings through the planned means of results dissemination through publication and thesis for academic purpose.

Voluntary participation

Please note that your participation in this study is voluntary and you have a right to refuse to consent. If you agree to join this study, you will be required to sign this consent form and answer the question that you will be asked by the interviewer.

Benefits

There are no direct benefits for participating in the study. However the findings from the study will derive key components of factors that influence medical doctors to move from clinical to non-clinical practice that will contribute in policy formulation with regards to human resource for health and ways to retain medical doctors.

Risks and discomfort

There are no risks or discomforts involved in this study. Participants will be asked questions through in depth interview that they will be able to give their views and ideas concerning the study.

Compensation for time

You will not receive any payment or other compensation for participation in this study. There is also no cost to you to participate in the study.

Confidentiality

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. We will not use your name in any of the information we get from this study in any way we think is best for publication or education. Any information we use for publication will not identify your name.

Consent form

I confirm that I have read carefully and I have understood the information provided and consent to participate in the study. I am aware that I can freely withdraw from this study anytime I wish to do so.

Who to contact If you have any question about this study

If you ever have questions about this study, you should contact the Principal Investigator Godlisten Martin, from Muhimbili University Of Health and Allied Sciences, P.O .Box 65001, Dar-es-salaam. If you ever have questions about your rights as a participant, you may call Dr. Bruno Sunguya, Chairman of the Research and Publications Committee, P.O. Box 65001, Dar es Salaam. Tel: 2150302-6.

Do you agree? Yes…….. No……

Participant agrees ……..... Participants does not Agree. ……..…

I, …… Have read the contents of this consent form and my questions have been adequately answered. I therefore agree to participate in this study.

Signature of the participant ……. Date ……

Signature of the interviewer …… Date ……

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

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9th August, 2018

Mr. Godlisten Martin
MPH-Distance Learning
MUHAS

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "BARRIERS FOR OPTIMAL USE OF ANTENNAL SERVICES IN TARIME DISTRICT-MARA, TANZANIA"

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 7th August, 2018 to 6th August, 2019. In case you do not complete data analysis and dissertation report writing by 6th August, 2019, you will have to apply for renewal of ethical clearance prior to the expiry date.

Dr. Emmanuel Balandya
ACTING: DIRECTOR OF POSTGRADUATE STUDIES

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