

MOSHI CO-OPERATIVE UNIVERSITY

**FACTORS INFLUENCING UTILIZATION OF FREE MATERNAL
HEALTHCARE SERVICES IN TANZANIA: A CASE OF PRIMARY
GOVERNMENT HEALTH FACILITIES IN KILIMANJARO REGION**

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By

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**A DISSERTATION SUBMITTED IN A PARTIAL FULFILMENT OF THE
REQUIREMENTS OF MASTER OF BUSINESS MANAGEMENT OF MOSHI
CO-OPERATIVE UNIVERSITY, MOSHI TANZANIA**

NOVEMBER, 2022

DECLARATION AND COPYRIGHT

I, **Gilbert M. Shao**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other higher learning institution for a similar or any other academic award.

Signature _____ **Date** _____

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Moshi Co-operative University a Dissertation titled “**Factors influencing utilization of free maternal healthcare in Tanzania: A case of primary government health facilities in Kilimanjaro Region**” in partial fulfilment of the requirements for the award of Master of Business Management of Moshi Co-operative University.

Dr. Alban Mchopa

(Supervisor’s name)

(Supervisor’s signature)

Date _____

DEDICATION

This dissertation is dedicated to my lovely parents Mr & Mrs Medard Shao, my uncle and his wife Mr & Mrs John Shao, to my brother Focus Medard and sister Bertha Medard and Prof Blandina Mmbaga. Special dedications to my supervisor Dr Alban Mchopa, my employer, co-workers and friends for their time, love, encouragement and prayers.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
HC	Health Care
KCRI	Kilimanjaro Clinical Research Institute
MHC	Maternal Health Care
MMR	Maternal Mortality Ratio
PNC	Postnatal Care
SDG	Sustainable Development Goals
TDHS	Tanzanian Demographic and Health Survey
UMHC	Utilization of Maternal Health Care
WHO	World Health Organization
SPSS	Statistical Package for Social Sciences

ABSTRACT

Improving utilization of maternal healthcare services helps in reducing or eliminating limiting factors among women who use maternal health care (MHC) services. The United Nation (UN) Sustainable Development Goal 3 and Tanzania Health Policy 2017 insist on improving MHC among the community members by proper adherence on early starting Antenatal Care (ANC), ANC 4+ visits, delivery at health facility and Postnatal Care (PNC) 3+ visits. This study focused on assessing factors influencing utilization of free maternal healthcare services in the government primary health care facilities in Kilimanjaro Region. A cross-sectional research design, with convenience sampling and purposive sampling techniques were applied to select 176 study respondents. Data were collected using survey, interview and documentary review. Data were analysed by using chi-square and multiple logistic regression technique into four outcomes early starting ANC before 13 week of gestation, 4+ ANC visits, delivery at health facilities and PNC 3+ visits. The findings shows that utilization of MHC was influenced by increasing education level ($P= 0.001$), urban residence ($P= 0.001$), attending to health facility for family planning ($P = 0.02$), male involvement on PNC ($P = 0.05$), quality of health infrastructure ($OR = 0.35$, $P = 0.016$, $CI: 0.15-0.82$) and MHC services satisfaction ($OR = 0.09$, $P = 0.03$ $CI: 0.01-1.12$). The study concluded that, improving utilisation of free MHC services contribute in solving adverse effects in maternal complication, health of the mother and child and family economic growth in general. Thus, it was recommended that the government and healthcare stakeholders should ensure community awareness on best practices in using health facilities, empower women economically, education, availability of sufficient health services at the health facilities. Further, Ministry of Health should ensure improvement of health facilities infrastructures and increasing community access to sufficient MHC services by putting more emphasis to those who live in a remote areas to access health facilities.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Maternal healthcare remains a big public health challenge in most less developed countries, (Leontine *et al.*, 2015). Approximately each day there are 810 cases of maternal deaths worldwide, 80% of deaths are preventable, 94% occurred in low and middle-income countries and Sub-Saharan Africa countries alone accounts for around 66% of global maternal deaths, (WHO, 2019). The World Health Organization (WHO) formulated Sustainable Development Goal number three (SDG-3) aiming at ensuring healthy lives and promoting wellbeing for all at all ages. One among the SDG-3 targets is to achieve universal access to maternal healthcare and fall in Maternal Mortality Ratio (MMR) to less than 70 per 100 000 live births by 2030. Good intervention for reduction in maternal deaths include having skilled birth attendant during delivery, available emergency obstetric care, reliable communication, referrals and access to healthcare, (Steele *et al.*, 2019; Adegoke *et al.*, 2009).

Effective and efficient utilization of maternal healthcare services reduces many maternal deaths and prevent maternal morbidity, (Mbuagbaw and Gofin, 2011; Oakley *et al.*, 2009). Presence of comprehensive Maternal Health Care (MHC) package with skilled professionals in developed countries (Poland, United Kingdom, Japan, Sweden and New Zealand) contribute to low MMR for many years and improved maternal outcomes, (Hogan *et al.*, 2010). There has been a big variation on MHC utilization between developed and Sub-Saharan African countries. In developed countries it is estimated that 91% of pregnant women receive four ANC visit, 91% during delivery assisted by skilled birth attendants and 99% delivered at health facility while in Sub-Saharan African countries 52% of pregnant women receive four ANC visits, 60% of births assisted by skilled attendants and 57% delivered at health facility, (WHO, 2019).

Utilization of MHC in most of Sub-Saharan African countries are observed still to be low and faced with several challenges, (Zureick-Brown *et al.*, 2013; Kinney *et al.*, 2010). Challenges like financial hardships, cultural beliefs, transportation facilities, quality of health services and interpersonal level (women autonomy, partner support, family income and demographic factors) have impact on MHC utilization, (Nuamah *et al.*, 2019; Banke-Thomas *et al.*, 2017). In 2000's most of African countries including Kenya, Nigeria, Ghana and Burkinafaso implemented removal of user fee or ensuring

free of charge provision of maternal healthcare services as a way of fighting against financial challenges on accessing MHC for women in need of such services, (Jonah, 2017). Evidence shows that removal of user fee has a positive impact in increasing MHC utilization, (Steele *et al.*, 2019; Lang'At *et al.*, 2019).

However, removing user fee alone cannot define effectiveness and efficiency of maternal health care utilization as it is associated with other factors like cultural believe, availability of quality services, attitude and other enabling factors, (Boudreaux *et al.*, 2014). In Kenya Kibera slums implementation of free MHC in government health care facilities did not improve health facility delivery as still above 50% of women delivered in private health facilities where they had to incur costs, (Owiti *et al.*, 2018). Furthermore, in India they experienced above 50% women delivery at private facilities while government health facilities offer MHC services at free of charge, (Silan *et al.*, 2014)

Tanzania formulated different strategies and programme, (Health Policy 2007, One Plan II 2016-2020, Health Sector Strategies Plan IV 2015-2020 and adopting SDGs) to strengthen maternal healthcare services. Unfortunately, enough, MMR still high at around 524 per 100,000 live births, (WHO 2019). Tanzania also adopted free fee scheme on accessing MHC services with the intention to increase MHC utilization. According to the Tanzania Demographic and Health Survey- (TDHS, 2017) it was observed that 51% of pregnant women achieve four ANC visits and only 24% of pregnant women manage to start ANC at the required time mainly 12 weeks of gestational age. About 63% of pregnant women delivered in health facilities, 64% of births are assisted by skilled professional and 66% of mothers are not receiving recommended postnatal care (PNC) within 42 days after delivery.

Kilimanjaro region had 91% of pregnant women delivered at health facilities, 96% of births assisted by skilled birth attendants on delivery, 59% of women get postnatal care after delivery and 25% of pregnant women attend and received ANC from skilled birth attendants. Other studies in Tanzania showed that 53.3% of health facilities delivery, PNC 20.7% and 54.3% assistance delivery by skilled birth attendants in Mwanza, (Orwa *et al.*, 2019). In addition, 58.3% ANC 4+ visits and 87.7% health facility delivery in Iringa district (Straneo *et al.*, 2016). Researchers explained barriers and interventions to improve MHC from ANC including delivery by skilled birth attendant

at health centre and PNC in quantitative and qualitative aspects, (Anold *et al.*, 2016; Ganle *et al.*, 2015; Bohren *et al.*, 2014). Some of the barriers indicated are transportation infrastructures, financial hardships, quality of services and customs and belief factors. Different studies were done on factors influencing or affecting utilization of MHC in Tanzania by looking on aspects such as education level, income level, women's autonomy level and distance to healthcare. Other factors are such as urban or rural residence (location), (Orwa *et al.*, 2019; Lwelamira *et al.*, 2015). Other researchers suggest further studies are needed on factors influencing utilization of MHC by combining rural and urban areas, (Kiango, 2015; Lodoroh, 2013). This information seems to be useful for policy makers, planners and other stakeholders in the health sector to identify which factors influencing utilization of MHC and planning mechanisms to improve all areas which are not performing well with regard to utilization of MHC. With this background, this study aimed to assess the factors influencing utilization of free MHC in primary government health facilities in Kilimanjaro Region Kilimanjaro region, Tanzania.

1.2 Statement of the problem

Maternal deaths and morbidities still a public health challenge in most of developing countries, (Kiango, 2015). Each day worldwide in count 810 maternal deaths and mostly occurred in and outside at health facilities (WHO, 2019). Tanzania as among of nation recording high maternal mortality ratio approximately 556 per 100,000 live births compared with WHO target of MMR being less than 70 per 100 000 live births (Bwana, *et al.*, 2019). Most of these deaths (80%) associate with pregnancy and childbirths but, effective MHC utilization can prevent them to a large extent, (Steele *et al.*, 2019).

Government and stakeholders' efforts on improving maternal healthcare services still much needed on fighting against maternal death and morbidity, (Prasad *et al.*, 2022). Demographic and Health Survey- (TDHS, 2017) it was observed that 51% of pregnant women achieve four ANC visits and only 24% of pregnant women manage to start ANC at the required time mainly 12 weeks of gestational age. About 63% of pregnant women delivered in health facilities, 64% of births are assisted by skilled professional and 66% of mothers are not receiving recommended postnatal care (PNC) within 42 days after delivery. Kilimanjaro region had 91% of pregnant women delivered at health facilities, 96% of births assisted by skilled birth attendants on delivery, 59% of women

get postnatal care after delivery and 25% of pregnant women attend and received ANC from skilled birth attendants. Other studies in Tanzania showed that 53.3% of health facilities delivery, PNC 20.7% and 54.3% assistance delivery by skilled birth attendants in Mwanza, (Orwa et al., 2019). From the above statistics Tanzania as a whole and Kilimanjaro Region in particular, shows there is low rate of utilization of MHC services and MMR still high to the community. This situation has compelled the researcher to assess factors influencing utilization of MHC in Tanzania. So far there are several studies done in maternal and health care provision in Tanzania on issues such as perceptions on male involvement in pregnancy and childbirth; Tanzania maternal healthcare provision; Factors associated with contraceptive use; Monitoring and evaluation of maternal and child healthcare programmes; Overview of maternal and reproductive health; Improving access to quality of maternal care to reduce maternal newborn deaths; Monitoring and evaluating to document the health improvement and Maternal and child health reports, (UNICEF, 2021; Centre for Disease Control, 2021; Stivin and Apollonia, 2018; Barker and Dutta, 2015).

After intensive and extensive literature review, it was revealed that there has limited knowledge on assessing factors influencing utilization of MHC services on primary government health facilities after free MHC policy adoption. Furthermore, despite the efforts done to address factors on MHC services utilization, there still exist some challenges on accessibility, quantity, quality and equity in MHC delivery. Therefore, the aim of this research was to assess factors influencing utilization of free maternal healthcare in Tanzania, with reference to Kilimanjaro Region government healthcare facilities.

1.3 Objectives

1.3.1 Main Objective

The main objective of this study was to assess factors influencing utilization of free maternal healthcare services in government primary healthcare facilities in Kilimanjaro.

1.3.2 Specific Objectives

The specific objectives of this study were to:

- i) Determine social factors influencing utilization of free MHC services among women,

- ii) Examine the economic factors that affect utilization of MHC services among women,
- iii) Determine the cultural beliefs that are influencing utilization of MHC services among women,
- iv) Determine health facilities factors contributing towards MHC utilization, and
- v) Identify types of maternal healthcare services which are freely provided by the government.

1.4 Research Questions

- i) What are the social factors influencing utilization of free MHC services?
- ii) What are the economic factors influencing utilization of free MHC services?
- iii) What are the socio-cultural beliefs that influence free MHC services utilization?
- iv) What are the health facilities factors contributing MHC utilization?
- v) Which MHC services are provided free at health facilities?

1.5 Justification of the Study

Effective and efficient utilization of MHC plays a big role to manage mother and child health against death, disability and illness. Comprehensive available MHC packages, activeness of women to use and being responsible for their health is important step in MHC utilization (Kasina, 2013; Mxoli, 2007). Identifying factors influencing utilization of free MHC will contribute to knowledge and effort to address observed challenges on MHC services utilization during ANC, delivery and PNC therefore improving maternal health care outcomes and finally support the achievement of a national and International policies. Tanzania adopted and formulated strategies (Health Policy 2007, One Plan II 2016-2020, Health Sector Strategies Plan IV 2015-2020 and adopting SDGs 2015-2030) to improve health services and to manage maternal deaths, illness, disabilities and ensure effective MHC utilization (Kiango, 2015; Kasina, 2013). SDG-3 target of universal access to maternal healthcare and MMR being less than 70 per 100 000 live births.

There is a need to understand each factor on how and to what level it contributes to influence MHC services utilization. The findings from this study will highlight direction to policy planners and policy makers in formulating and implementing future MHC strategies and programme. The findings from this study will support the research and be incorporated to the new health programme which will be renewed when the

current policies and guidelines deliver. This may include some direct or indirect interventions on MHC utilisation nationally and globally.

On the other hand, the findings and recommendations obtained from this study will provide basis and evidence on improving infrastructures, quality and capacity on providing comprehensive MHC package in other region. Lastly, the study will add to literature material on MHC utilization and areas for further research. Furthermore, the findings are anticipated to be very useful to the policy researchers and academicians dealing with the same or related subject matter. Women of the child bearing age (15-49 years) will find these findings very imperative in awakening them on the essence of consistently attending clinics during pregnancy period mainly from 12th weeks. This in turn will ensure mothers health and safe delivery.

1.6 Organization of the study

This study is organised in five chapters. Chapter one covers the background to the study, statement of the problem, study objectives, study questions and justification of the study. Chapter two presents the theoretical, empirical literature review and the conceptual framework. Chapter three describes research methodology; research design, study population, sample size, sampling techniques, data and data collection methods, data analysis techniques, reliability and validity of research instruments. Chapter four presents the findings based on socio, economic, culture and health factors that influence of women on utilization of maternal health care. Finally, chapter five describes the summary of the findings, conclusion, recommendations and areas for further studies.

CHAPTER TWO

2.0 LITERATURE REVIEW

This section presents the information on chapter two of the thesis which is mainly on literature review. The chapter composed of the following information including among others definition of the key terms, theoretical literature review (Economic theory of the demand for health care and Health behaviour theory), empirical literature review, research gap and conceptual framework as stipulated here-under.

2.1 Definition of the key terms.

2.1.1 Maternal healthcare

Maternal healthcare refers to the health care of women during pregnancy, childbirth and the postpartum period to ensure health of mother and child are protected, (Nuamah *et al.*, 2019). In this study, the maternal healthcare is used to mean health management of woman received during pregnancy, childbirth and after childbirth.

2.1.2 Maternal healthcare utilization

This refers to the trend of using maternal healthcare from ANC, childbirth to PNC. The WHO recommends first visit be within 12 weeks after gestation, at least 4 ANC visits to delivery and from 2016 it recommended 8 contacts, childbirth in health facility by assistance of skilled birth attendant and attending PNC within 42 days of delivery (WHO, 2016). In this study, the maternal healthcare utilisation are used to mean persistence of women to attend ANC above 3 times and first visit being within 12 weeks after gestation, delivered at health facility and attending PNC above 3 times.

2.1.3 Antenatal or prenatal care

Is the care offered by skilled health-care professionals to pregnant women to ensure best health of mother and child are maintained and it gives chance for early detection of bad sign and timely managing potential risks for the health of mother and baby during pregnancy and delivery (Mgata & Maluka, 2019; WHO, 2018). In this study, the antenatal or prenatal care are used to mean health management woman received before childbirth.

2.1.4 Skilled birth attendant

Skilled birth attendant, is the professional health worker who provides basic and emergency care to women and their newborn during pregnancy, childbirth and during

postpartum period. Skilled birth attendant includes midwife, physician, obstetrician and nurse (WHO, 2002). In this study, the skilled birth attendants shall mean professional maternal healthcare staff who deals with maternal care management since pregnant, during delivery and after childbirth.

2.1.5 Postnatal Care

Care provided to mother and her newborn baby up to six weeks after childbirth to help managing any abnormal signs after childbirth (Gill, *et al.*, 2007). In this study, the postnatal care is used to mean health management woman received after childbirth.

2.1.6 Health facilities

The term health facility has been defined by Ahmadi *et al.*, (2017) as any location where healthcare is provided. Health facilities range from small clinics and doctor's office to urgent care centers and large hospitals with elaborate emergency rooms and trauma centers. The number and quality of health facilities in one region is a common measure of that area prosperity and quality of life. In many countries' health facilities are regulated to some extent by laws and licensed by regulatory bodies. This study therefore, adopted the Ahmadi *et al.*, (2017) definition on health facilities.

2.2 Theoretical literature review

This study was guided by two theories namely Economic Theory of the Demand for Healthcare and Behavioural Theory. The main theory were economic demand for health care theory and because it cannot be able to capture the behavioural part, then it was supplemented by Behavioural theory. Therefore, the application of the two theories (Economic Theory of the Demand for Health Care and Behavioural Theory) was compelled by the nature of this study whereby, in one way the researcher wanted to capture the economic relationship in the utilization of the healthcare facilities and at the same time looking on the behaviours among women in accessing maternal health services. Therefore, two theories altogether looked on demand and supply factors with regard to free MHC and how do they influence utilization of MHC.

2.2.1 Economic Theory of the Demand for Healthcare

The theory was propounded by Grossman in 1972 and stipulates that health capital and the demand for the health gives start up on most of economic theories of healthcare demand. One of the theory adopted by Ensor *et al.*,(2004) explains the concept of demand for healthcare as “demand for healthcare derived from the demand for health”,

Ensor and Cooper, (2004). Market price influence demand of goods and services. Change in prices has inverse implication on change in the quantity demanded. This theory influences free user fee policy with the aim of increasing women access to healthcare. User fee as a financial barrier observed as big hindrance factors for women to access healthcare. However, there are factors which drive effective utilization of healthcare services.

Demand factors involve price (official, unofficial and related costs), social, household, cultural and perception, income level, service quality and education level (general healthcare). Supply factors involve official price, technology for treatment and management efficient, (Witter *et al.*, 2013). As direct financial barrier is reduced its results to increase utilization of services. Government engagement on addressing financial barriers is not enough, to maintain quality and addressing non-financial barriers which limit effective and efficiency utilization of maternal care, (USAID 2014). Appropriate and on time ways adopted to reduce demand and supply barriers influences increase utilization of maternal healthcare.

The Economic theory of the demand for healthcare has a direct link with free utilization of the maternal healthcare facilities as far as under normal circumstance, the economy is the main determinant of factor for a certain utility, in this case maternal healthcare facilities. If someone is economically well placed, then the utilization of a certain service increase and vice versa. So, the economic theory of demand for healthcare was very proper as it touches the economic components which automatically trigger the utilization of the maternal health care. Unfortunately, economic theory of demand for the healthcare facilities was inadequate to capture the behavioural dimension of this study. This then, called for the application of the second theory Health behaviour theory. The combination of the economic theory of the demand for healthcare and health behaviour theory were therefore adequate to make a thorough analysis on the factors influencing the utilization of free maternal healthcare facilities in Tanzania.

2.2.2 Health Behaviour Theory

This theory was developed by Andersen (1968) to explain why some people have good tendency to use healthcare than others. This theory classifies three main factors, which are predisposing, enabling and need based factors. Ahnken *et al.*,(2013) and Machira (2017) also adopted this theory on their study about the utilization of maternal health

services, (Ahnken *et al.*, 2013, Machira, 2017). Predisposing factors shows some people have greater tendency to use healthcare than others. Such factors involve demographic, social and behaviour factors. Enabling factors explain supporting resources from individual and community to receive healthcare services such as income, transport facilities, insurance, health facilities and quality of care. Need based factors explain why individuals seek or reject health services.

The health behaviour theory appeared to be very useful as it managed to find the association between the utilization of maternal healthcare facilities and the behaviour of the recipients. The theory stipulates that among other factors which drive someone to utilize a certain service is the behaviour of that individual in relation to the service concerned such as health seeking behaviour, health facilities utilization behaviour and health cost effecting behaviour. In this respect, the two theories (economic demand for healthcare and health behaviour) had shown a clear trajectory with respect to the influencing factors on the utilization of the free maternal healthcare facilities in Tanzania. Based on the nature of this study, the two theories are partly inseparable when it comes to utilization of the free maternal healthcare facilities as long as they tend to complement one another. But all in all, the two theories i.e. economic demand for healthcare and health behavioural theories appeared to be very useful in assessing factors influencing utilization of free maternal healthcare facilities in Tanzania whereby primary healthcare facilities in Kilimanjaro Region were taken as a case study.

2.3 Empirical Literature Review

2.3.1 Social factors affecting utilization of MHC among women

A study by Orwa *et al.*, (2019) on maternal healthcare services use in Mwanza Region, Tanzania found that women who have education level from secondary level and above are having good utilization of MHC services than women with primary level and non-formal education. Similar to wealth level, rich and middle wealth level women perform well than lower and poor women. The study recommends initiation of early ANC visit to influence using of ANC, delivery at health facilities and PNC services. The study didn't explain how education level can affect using MHC services and what MHC basic knowledge women were having. Also, study concludes that apart from adopting free policy on MHC there is a need for further studies to understand social, economic and cultural factors which impact women to use MHC services.

According to Dapaah & Nachinaab, (2019), Machira, (2017), Kiango, (2015) and Lugina, (2014) there are several factors found to have significant associations with the utilization of the MHC services among the community members including mothers' education, husbands or partners' education and occupation, marriage type, access to media, current use of contraceptives, household wealth level, region or location and place of residence. These factors in one way or another, affect significantly the utilization of MHC services not only in Tanzania but globally, (Soojin and Sun-Young, 2019).

Furthermore, it was revealed that even though the Tanzania government has free healthcare services for women who are giving birth but still there is insufficient transportation facilities which prevents childbirth from being managed. Yet the national health policy calls for elimination of discrimination of all forms against women who are seeking for healthcare services. Once again, still there are several reported incidences in different parts of the country including Mwananyamala Hospital in Dar es Salaam whereby women have been mistreated in the course of seeking for MHC services. During this mistreatment, some of them lost their babies, their own lives or both babies and themselves. In many rural areas for example, there is an acute shortage of transportation and low contraceptive prevalence which restrict women's use of family planning services, (Lugina, 2014).

2.3.2 Economic factors influencing utilization of MHC among women

A study by Nuamah *et al.*, (2019) on access and utilization of maternal healthcare in a rural district in the forest belt of Ghana. The study examined the access and utilization of MHC services and find out that accessibility of healthcare is associated with the economic factors (income of service seeking individual) and this greatly influence utilization of MHC services. However, still maternal knowledge among the majority of childbearing women was low. The study indicated older women utilized MHC more than teenagers and there was no significant influence of wealth level and use of ANC and delivery to health facility but low income women are using well PNC than wealth women (Nuamah *et al.*, 2019). Another study indicated that women who have high income level follow-up MHC services than poor women due to indirect cost incurred and opportunity costs (Gabrysch & Campbell, 2009). On this case, the two studies indicate that level of income influence adherence of MHC utilization in either direction with regard to maternal healthcare other factors remain constant.

It is well established that higher levels of family income is associated with increased utilization of modern health care services (Pat *et al.*, 2019). Women's involvement in gainful employment is also an important factor positively affecting the use of quality medical care to treat complications. This also empowers women to take part in decision-making processes about health care in the family. Women who are involved in gainful employment are more likely to use modern health care services to treat complications during their pregnancy. Available evidence shows that household wealth is positively and significantly associated with choosing health facility for delivery. It was also found that household poverty and personal problems were negatively related to the use of maternal health care, (Patience *et al.*, 2011). In most health centers findings indicates that generally, most of the women undertake the required visits for antenatal services and take doses of the tetanus toxoid vaccine as required by the World Health Organization. But there are clearly eye-marked variations between women from high level of economic status and those from poor families. The adherence in the use of afore-mentioned services is higher to women with high income than otherwise. Digging down to the story, there are other facilities which women from poor families are missing during the time of seeking for MHC services and hence acting as an obstacle towards utilization of maternal healthcare services. Some of them may be small things like transport cost from their residence to the health facility area.

2.3.3 Cultural factors affecting utilization of MHC among women

In one study Ketut *et al.*, (2019) investigated the role of culture on maternal healthcare utilization. The study revealed that cultural aspects influence maternal healthcare utilization directly and indirectly. Contribution factors like decision making, marriage age, mistreatment from health staff, religion, pregnancy planning and woman responsibilities influence utilization of MHC. Women attend ANC at health facility but during delivery choose to deliver with traditional birth attendance (TBA) where they believe in supernatural power for child protection. (Dapaah and Nachinaab, 2019), showed women choose TBA not only because of cost factor but mostly the trust which they have to TBA. Also, another researcher said that women prefer spiritualists and diviners' services even though the health services are available. Also, studies show cultural factors impact MHC utilization as culture varies from place to place and one area can have different level of MHC services utilization, (Yarney, 2019).

Generally, the utilization of maternal healthcare services and intensity of antenatal

services are influenced by age of the mother, type of birth, education of the mother, ethnicity, economic status of the mother, geographical location, residence and religious affiliation, (Patience *et al.*, 2011). Cultural factor plays a significant role towards the utilization of MHC among the community members. Some cultural factors and taboos are against vaccination; in this respect mothers are not allowed to go to the health center for vaccination under different allegations such as vaccination leads to sterility among women, vaccination makes newborn important or vaccination may limit women from having many children.

Cultural factors (decision making, marriage age, religion, pregnancy planning, woman responsibilities and believes) affect utilization of MHC services particularly during pregnancy in the sense that mothers may be restricted from even taking some food type such as eggs leavers or any other animal part appeared to be nutritious which as a result weaken not only mothers but also the child to be born. Furthermore, due to cultural background some women who are genitally mutilated are scared going to hospital for utilization of MHC, (CDC, 2021). Others are warned in advised by their husband that it happens when they have gone to the health centers then definitely they will be divorced.

2.3.4 Health facility factors on MHC services utilization among women

Ngan *et al.*, (2016) conducted a study on “back to basics” approach for improving maternal health care services utilization in Lao People Democratic Republic (PDR). The study aimed to explore factors affecting utilization of MHC in Lao PDR. The study findings showed that women have positive attitudes for using modern MHC services rather than going to TBAs. Women are dissatisfied with MHC services provided by government health facilities due to poor facility infrastructures, irregularity of services, shortage of skilled birth attendants, high costs and perception of mistreatment by male attendants. Also, according to Ope, (2020) improvement health facilities to provide best standard maternal care has impact on increasing women utilization of MHC services.

Mahumud *et al.*, (2019) studied women’s preferences for maternal healthcare services in Bangladesh to study characteristics of women who consider to choose place of childbirth. The findings showed that women prefer more female doctors than male because they believe it is difficult for female to explain medical complications to the

males, (Mahumud *et al.*, 2019). Availability of caesarean sections, drugs and supplies drives women to choose where to go for MHC and also competent, respective and friendly attitude of health provider and promptness of services influence utilization of MHC, (Okanofua *et al.*, 2017).

Availability of facilities of health services and degree of proximity to health facilities and knowledge of women to know which service are available influences utilization of MHC services from the health facilities, (Kim *et al.*, 2019) hence, women need improving primary health facilities quality of care in team of quality and availability of drugs and services and respect by health providers.

2.3.5 Free maternal healthcare services utilization among women

A study on the implementation of Fee-Free Maternal Health-Care Policy in Ghana to examine perspective of users of free MHC policy showed that ANC services still have charges which go down after implementation of National Health Insurance Scheme, and free delivery services, (Anafi *et al.*, 2018). The study also showed that the indirect cost for accessing ANC is a barrier for MHC utilization since pregnant women who attend for delivery are required to carry delivery supplies, things for child and for mother like two nappies, safety pin, night coats, new bed sheets, plastic delivery sheets, two bottles of disinfectants and others. However, no clear information to the public which maternal care service offered freely and which services are available, (Anafi *et al.*, 2018).

A study on effect of the free maternal programme on the access and outcomes of maternal and newborn health in Kenya found that regardless of the services stated to be offered freely, still there has been fee to some of the services and shortage of availability of ANC to some health facilities and fear of free MHC services due to poor quality impairs accessing MHC services, (Jonah, 2017). Basically, free maternal healthcare service utilization covers the antenatal care uptake, facility delivery and determine the utilization impact on stillbirth, perinatal and neonatal deaths. In the contemporary time there is a high improvement towards the utilization of MHC globally and in the specific countries. The increase in the utilization has been necessitated by global and country specific campaigns on the importance on the importance of maternal healthcare services to mothers and to the newborns.

2.4 Research Gap

Generally maternal deaths and morbidity is the challenge to most of less developed countries (Kiango, 2015). Most of these deaths (80%) are associate with pregnancy and childbirths but, effective MHC utilization can prevent them to a large extent, (Steele *et al.*, 2019). The reviewed of most of studies focused on direct causes of maternal deaths, maternal healthcare provision, family planning. The studies reviewed was Perceptions on male involvement in pregnancy and childbirth Stivin and Apollonia, (2018); Factors associated with contraceptive use (Centre for Disease Control, 2021); Maternal healthcare services use Orwa *et al.*,(2019); Monitoring and evaluating to document the health improvement and Maternal and child health reports, UNICEF, (2021); Access and utilization of maternal healthcare Nuamah *et al.*, (2019); Factors for late initiation of maternal care Mgata and Maluka (2019); Maternal death surveillance and response Said *et al.*, (2021).

After intensive and extensive literature review, it was found that there has limited knowledge and studies conducted on assessing factors influencing utilization of MHC services on primary government health facilities after free MHC policy adoption. Since the effective MHC utilization can prevent maternal death and illness, Steele *et al.*, (2019) in this light that the researcher perceived the justification to undertake such a study in order to fill this knowledge gap on analysing factors influencing utilization of free maternal healthcare.

2.5 Conceptual framework.

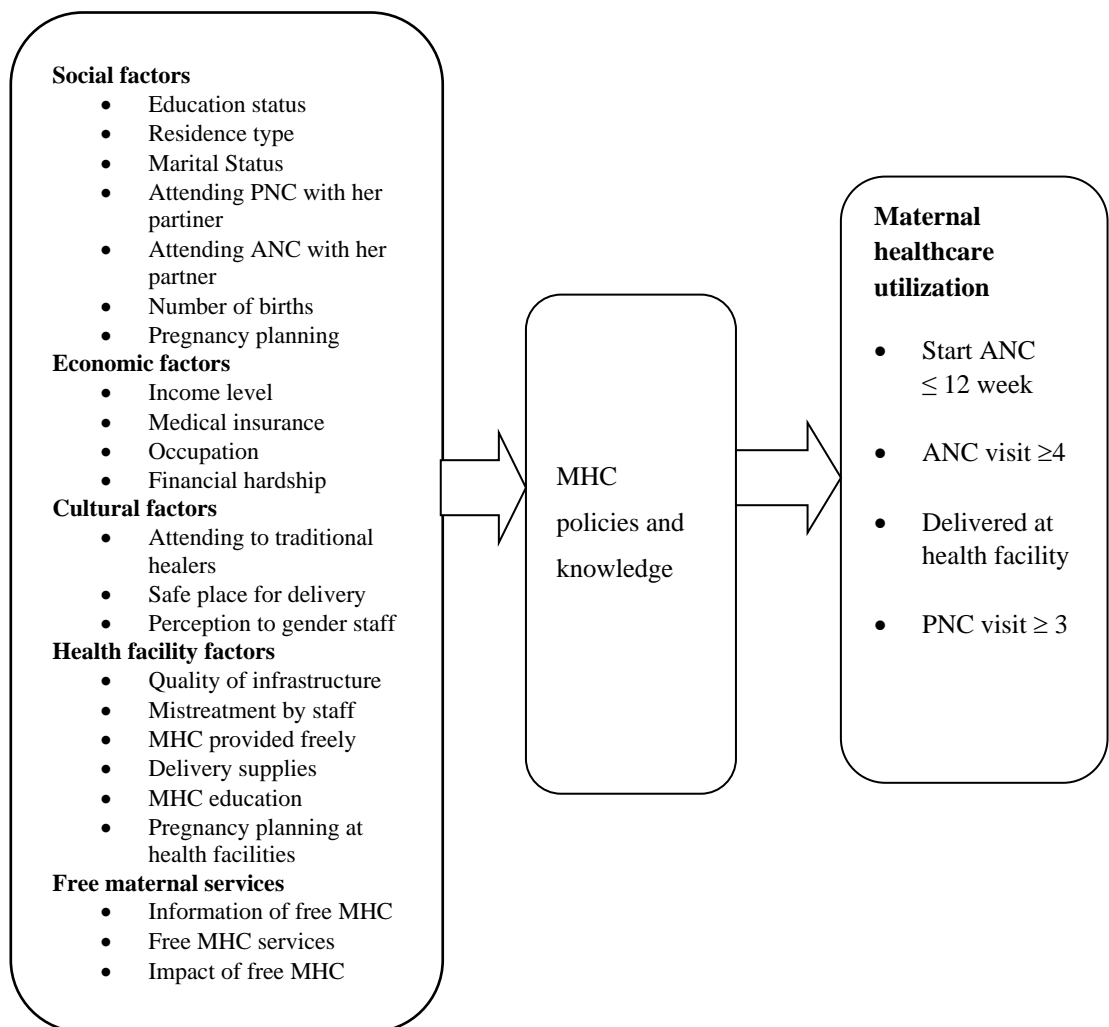
The conceptual framework of this study depicts the factors influencing maternal healthcare utilization. As explained by Andersen, (1995) theory of health behaviour by considering mainly three factors on why some people have good utilization rate on healthcare services than others, first factors is predisposing factors shows some people have greater tendency to use healthcare than others. Such factors involve demographic, social and behaviour factors. Second factor Enabling factors explain supporting resources from individual and community to receive healthcare services such as income, transport facilities, insurance, health facilities and quality of care. Third factor Need based factors explain why individuals seek or reject health services. Factors influencing utilization of free MHC services are presented in diagram below to explain how they influence maternal healthcare utilization. There are three sets of variables including the independent, intervening and dependent variables of the study. The

independent variables are socio, economic, cultural and health facility factors which influence women utilization of MHC services. Dependent variable is utilization of MHC services which is indicated on number of weeks of starting ANC, number of ANC visits until delivery, delivery at health facility, and number of PNC visits. The existence of favorable maternal healthcare policies, MHC knowledge and awareness, free MHC services and health facilities would result to influence achieving early starting ANC less 13 week of gestation period, 4 or more ANC to childbirth, delivery at health facility and above 3 number of PNC visit.

Independent Variables

Intervening Variables

Dependent Variables



NOTE: ANC - Antenatal care, PNC - postnatal care and MHC means maternal health care

Figure 1 : Conceptual framework on assessing factors influencing utilization of free maternal health care from primary government health facilities.

CHAPTER THREE

3.1 METHODOLOGY

The research methodology presents the information about kind of methods used of this dissertation. The chapter encompasses the following aspects including research design, description of the study area and justification for its selection, population, sampling frame, sample size, sampling, types of data and sources of data, data collection methods, data analysis techniques, data validity and reliability.

3.2 Research Design

This study applied a cross-sectional research design with a mixed method approaches with both quantitative and qualitative methods. This type of research design was selected because of one time survey. The design was also used since collection of data involves different areas, different variables and, independent and dependent variables are analyzed at once. The method allows data collection from different groups of respondents at a time, gave room to make comparisons among different groups of the respondents to see how dependent variable relates to independent variables. Further, the approach saved time and other resources required to accomplish the task.

3.2 Geographical Coverage

The study was done in Kilimanjaro Region in Tanzania. The region has 91% of pregnant women deliveries at health facilities, 96% of births assisted by skilled birth attendants on delivery, 59% of women get postnatal care after delivery and 25% of pregnant women attend and received ANC from skilled birth attendants, (TDHS, 2017). Moshi Urban and Rombo District were selected as the area for study where three dispensaries and all health centers were involved in each District. Selection of three dispensaries both in Moshi Urban and Rombo District (rural area) was done randomly within the available Health facilities in the region. At Rombo district the health centers used were Keni, Tarakea and Karume and for dispensaries were Ibukoni, Shimbi, and Mokala. At Moshi municipal involved Majengo and Pasua health centers and for dispensaries included Kiboliloni, Rau, Longuo and Korongono.

3.3 Population, Sample and Sampling Procedures

3.3.1 Population

The total population of the study were all women used MHC services at primary government health facilities and who lived in the study area with a minimum of one

year prior to delivery and had given birth in between 2018 to 2021 in Kilimanjaro region. Last delivery was taken when woman had more than one birth between 2018 and January 2021. Age 15 to 49 is considered as a reproductive age according to WHO, (2020). Health workers from the study areas who are dealing with MHC were also involved in this study because they are participating in delivery MHC services to the women. The study used sample of 171 women who utilize MHC services and four interviews from two women and two staff who dealing with MHC services where involved in the study.

3.3.2 Sample size

The number of pregnant women in Rombo District and Moshi Municipal who attended at primary government health facilities for MHC services and lived in study area minimum of one year prior to delivery, the total population was large and unknown under such condition sample size, the researcher opted formula developed by Fisher *et al.*, (1991), to arrive at sample size of 171 respondents as follows.

The desired sample size was determined using the formula of Fisher *et al* (1991):

$$\text{Sample size} = Z^2PQ/e^2 \dots\dots\dots\text{Equation (1)}$$

Where:

Z is the standard normal deviation (1.96 for 95% confidence level)

e is a desired level of precision (margin of error =0.075)

P is proportion of the population (% picking choice which is 0.5 when p is unknown)

Q is 1-p

Therefore:

$$=1.96^2 \times 0.5 (1-0.5)/0.075^2$$

$$= 171 \text{ respondents.}$$

3.3.3 Sampling Procedures

Convenience sampling and purposive sampling techniques was applied in this study to recruit a 176 study respondents. The convenience sampling technique applied to obtain the respondents who took part in this study. The technique enabled the researcher to obtain women in the study area at the government primary health facilities who attended Antenatal Clinics- ANC or Postnatal Clinics- PNC and therefore, they are the ones who were interviewed. Furthermore, the researcher applied snowballing technique to obtain those who attended in previous years. The two techniques at the end of the

day enabled the researcher to obtain the adequate sample size for data collection and analysis. However, purposive sampling technique was used to select some health workers who were dealing with MHC services. This random sampling technique aimed at obtaining key informants who could provide information to satisfy the study objectives through interview method.

3.4 Types and sources of data

This study used both primary and secondary data. Primary data included socio-demographic characteristics such as age, marital status, number of births, education level, income level, place of birth, number of ANC visits and factors influencing utilization of maternal care. Primary data were collected by using survey and interview techniques. The secondary data involved data which could not be collected instantly or using existing files and records, these were extracted from journals, reports, papers, newspapers and dissertations. In this study secondary data included facility infrastructures, hospital services, obstetric professionals, maternal care budget and disbursement of funds.

3.5 Data Collection Methods

3.5.1 Survey

This method used questionnaire to collect data from women using maternal healthcare services based on research questions and objectives. Structured and semi-structured questionnaire were formulated to collect data from targeted respondents. Women who participated are those who had their last birth in 2018, 2019, 2020 and January 2021 and living in the district area one year before delivery.

3.5.2 Interview

By using interview guide, data were collected from participants individuals who had experienced and knowledge about maternal care services utilization. Participants were allowed to share their experiences, opinion and reality on factors that influence maternal care services utilization for about 20 minutes per interview. About four interviews were performed, where two health staff and two from women who were using maternal healthcare services from Moshi and Rombo District.

3.5.3 Documentary Review

Documentary data were collected from district medical office, health facility office and Ministry of Health, Community Development, Gender, Elderly and Children data base.

Data involved women delivery in health facility, availability of ANC and PNC services, professional obstetric, infrastructures, costs of maternal care, availability of government primary health facilities, government budget and fund disbursements.

3.6 Data analysis techniques

3.6.1 Quantitative Data

In the entire exercise, the researcher collected and thereafter analyzed both qualitative and quantitative data. After the data collection exercise, both descriptive and inferential statistics methods were used to analyze the data. The data analysis was done with the help of a Statistical Package for Social Sciences (SPSS) computer software. The respondents' characteristic on using MHC facilities, descriptive statistic technique were employed. Interlink between independent and dependent variables was analyzed using multiple logistic regression, multivariate analysis techniques and Chi square test at 95% confidence interval. Researcher used both methods because chi square gives association between independent and dependent variables and multivariate analysis examines relationships among multiple response variables at the same time. Multiple response analysis technique applied in analyzing multiple answers' questions.

3.6.2 Qualitative data

The study used thematic analysis approach because it aligns with research objectives and aim. Data were translated, transcribed, coded and thematic analysis approach were applied for qualitative data analysis. Six thematic steps accompanying qualitative analysis were, familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report. After analysis of qualitative data, the qualitative information was presented, explained and linked with quantitative data to have more meaning based on research objectives.

3.7 Data Validity

Validity is defined as the ability of an instrument to measure what it is supposed to measure. Validity tests are categorized into four types including content validity, criterion validity, construct validity and face validity. Thus, this study resorted to content validity which refers to the extent to which measurement questions actually measure the presence of those constructs intended to be measured. In order to ensure validity of data collection, a pre-testing of the questionnaire was done with ten respondents; five from Rombo District and five from Moshi Municipality. The pre-

testing was done in order to test the data collection instruments, assess time for data collection, check availability of the study population, see how research team work together, test procedures for data processing and analysis and check if the findings were relevant.

3.8 Reliability of Data

Reliability refers to the robustness of the questionnaire and, in particular whether or not it will produce consistent findings at different times and under different conditions such as with different samples or with different interviewers, (Saunders et al., 2012). The study questionnaire was subjected to the reliability test. A number of approaches are used for measuring reliability such as pre-test, internal consistency and alternative form. The study made use of internal consistency to measure reliability using Cronbach's Alpha which is one of the most used measures of reliability in social and organizational sciences. In this study after the measurement, a Cronbach's Alpha of 0.82 was obtained which was above the acceptable range of 0.65-0.8 and most of the items in the questionnaire appeared to be worth of retention.

CHAPTER FOUR

4.0 FINDINGS AND DISCUSSION

4.1 Overview

This chapter presents the analysis, findings and discussions of the study. The chapter is organized into two sections. It consists of the socio-demographic characteristics of the respondents as well as presentation and analysis of the findings related to the study objectives. The general objective was to assess factors influencing utilization of free maternal healthcare services in government primary health care facilities in Kilimanjaro Region and specific objectives were to determine social factors influencing utilization of free MHC services among women, determine the economic factors that affect utilization of MHC services among women, determine the socio-cultural beliefs that are influencing utilization of MHC services among women and examine availability of MHC services provided freely.

4.2 Response of respondents

During data collection process, a total of 176 copies of the questionnaires were distributed to the study participants for data collection, all 176-questionnaires equivalent to 100% forms were returned to the researcher.

4.3 Demographic Characteristics of the Respondents

It was imponderable to have a section on socio-demographic data because generally, women seeking for maternal healthcare services or women who are utilizing maternal healthcare services fall with different categories of in terms of socio-demographic characteristics. Depending to the nature, type and intensity of socio-demographic characteristics in relation to the utilization of free maternal healthcare facilities in Tanzania. Despite the fact that some of these factors are found in some of the specific objectives but based on their genuineness in this study it was important to be discussed in the upfront. A sample of 176 respondents was drawn from different women who received MHC services at primary government health facilities in Rombo District and Moshi municipal. Information on socio-demographic characteristics such as gender, age, education level, marital status, occupation and residence were collected and analyzed to show their applicability to the study and hereunder presented.

4.3.1 Age of respondents

In terms of their socio-demographic characteristics, respondents were profiled in order

to determine their livelihood and clearly define the comparisons as depicted in Table 1. The findings indicate that 46% of respondents were in age group from 26-35 years followed by 41% aged between 19-25 years and 13% were between 36-45. This means that the majority of the respondents were youth aged 26 years and above.

The findings show that the respondents' maximum age was 44 years and a minimum age was 19 years old. The median age was 28.2 years and standard deviation of 6.1 years. Findings indicated that most of the participants were energetic and no adolescents participated in the study. The findings are similar to that of Orwa *et al.*, (2019) who also found that women with median age 27 participate mostly in accessing maternal health care because they are willing and have ability to handle family responsibilities.

Table 1: Age of the respondents (n=176)

Age group	Frequency (n)	Percent (%)
19-25 years	73	41
26-35 years	80	46
36-45 years	23	13
Total	176	100.0

4.3.2 Marital status of the respondents

Furthermore, the study analyzed marital status of respondents and the findings in Table 2 revealed that most of the respondents (69%) were married and (31%) were either single, cohabiting, or separated. This means that most of the women who access MHC at the primary government health facilities were married. This can be true due to the fact that majority of the respondents were youths aged 19 - 35 years old. This study provided similar finding like the one of Owit *et al.*, 2018).

Table 2: Marital status of the respondents (n=176)

Marital	Frequency (n)	Percent (%)
Single	33	19
Living together	19	11
Married	122	69
Separated	2	1
Total	176	100.0

4.3.3 Education level of the respondents

The findings as provided in Table 3 indicate that 51% of the respondents who had primary level of education followed by 42% who had secondary level (O-Level or A-level), 6% acquired tertiary levels of education and 2% had no formal education at all.

This means that more than half of respondents had primary level of education followed by those with secondary school who use primary government health facilities because was provided freely. This can be due to the fact that most of educated people prefer to attend referral hospitals or private health facilities because they have health insurance and can afford costs. The findings are similar with those of Lwelamira *et al.*, (2015) who found that 57.5% of the respondents had primary level, followed by none educated 25.4% and secondary+ level 17.1% respectively.

Table 3: Education level of the respondents (n=176)

Education level	Frequency (n)	Percent (%)
None	3	2
Primary Level	90	51
Secondary Level	73	42
Tertiary	10	6
Total	176	100.0

4.3.5 Plan for last pregnancy

It was important to know the women who planned to get pregnancy. Findings as summarized in Table 4, show that respondents who planned to be pregnant were 60% and those with no plan were 40%. This indicates that the majority of participants planned to have a baby, which means most of the respondents had made preparation of handling a newly coming baby. This probably influenced them to utilize maternal health care services since they are psychologically and physically ready to take care for the pregnancy.

Table 4: Plan for last pregnancy (n=176)

Pregnancy planned for that time	Frequency (n)	Percent (%)
Yes	105	60
No	71	40
Total	176	100.0

4.3.6 Maternal complication

In this study, it was also important to know maternal complications if any among women who attend MHC services. The findings show that 70% did not face any complication and 30% face some complications. This means that a woman who faces complications were attended MHC care services than those who do not. This scenario was found to be common in all health centres visited.

4.4 The Influence of social factors on free MHC services among women.

4.4.1 Education

It was important to know about respondents' education status in relation to maternal health care utilization. The respondents who utilize the government primary health services are mostly primary level and below constituting to 53%. Education level was grouped on none formal education, primary, secondary and tertiary level education. The study findings in Table 5 show that as education level increases the rate of MHC utilization increases. The women who had above primary level of education show their chance is higher on adherence to MHC services and they know the value of it than those who are in primary level and those with none school education level at all.

Level of education empowers women to seek MHC services at health facilities. Through chi-square testing on measuring p-value, the result show education has significant influence on PNC visits only ($p=0.001$). This study provide similar result like those of Celik and Hotchkis, (2000) which shows high level of education influences MHC services utilization. It is possibly that media, political figures and family members inspire women to attend effectively MHC services.

Table 5. Education Level and MHC Services Use

Education level	Freq	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit > 3 (n=14)	p-value
None	3	3(100)	3(100)	0.58	3(100)	0.63	3(100)	0.001
Primary	90	90(100)	79(88)		67(74)		9(10)	
Secondary	73	73(100)	66(90)		58(80)		13(18)	
Tertiary	10	10(100)	10(10)		7(70)		6(60)	

4.4.2 Marital Status

Another social factor identified was marital status which influences maternal healthcare services utilization. Married women constituted 69% of all respondents according to Table 6. The study aimed at knowing the frequency of women participation in utilizing MHC services along their respective marital status. The study findings show that, all women irrespective of their marital status use health facility delivery services. As far as ANC visits is concerned, the participation is 100% for the separated; 92% for married; 90% for cohabiting women and 80% for single women. As far as those who started ANC, the findings show that, in involvement 79% for cohabiting, 77% for married women, 76% for singles and 50% for separated women or

respondents. As for PNC the finding shows 30% for single, 16% for cohabitation and 15% for married women. Generally, married women and women who are living with their partners without formal marriage, are in good position of getting on ANC's than other group. This is influenced by psychology perspective like willing to be pregnant, backup from partner to assist women to go to health facilities and supports on finding income during the time of going to health facilities. But on PNC, separated women attending the services at high rate than other category which can be associated with either cancelling by health provider after not having good record on ANC attending, birth complication which requires them to attend frequently. This study has inverse finding with the study by Nuamal *et al.*, (2019) which shows cohabiting group access and use ANC better than marriage woman category.

Table 6: Marital Status

Marital status	Frequency	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
Living together	19	19(100)	17(90)	0.39	15(79)	0.83	3(16)	0.19
Married	122	122(100)	112(92)		94(77)		18(15)	
Separated	2	2(100)	2(100)		1(50)		0(0)	
Single	33	33(100)	27(82)		25(76)		10(30)	

4.4.3 Pregnancy planning

The study wanted to know whether MHC services utilisation can be influenced by either woman who planned pregnancy or not. The study shows 60% of respondent planned to get pregnant while 40% did not wish to conceive. The women who planned to get pregnant (91%) and those who did not plan (87%) achieved attending ANC 4+ 91% and 87% respectively. Those who started ANC < 13 weeks who planned were 75% and those who did not plan were 79%. Also, on attending PNC 3+ number of visits who planned before were 22% and those who did not plan were 13%. Women who plan to have pregnant, their rate was high on attending ANC 4+ and on PNC visits 3+ compared with those who not wish to become pregnant. At the same time, women who plan to take pregnancy they may be more comfortable, psychologically and physically ready to handle challenges and to adhere to the MHC requirements.

It may be easier for those planned to become pregnant to dictate if they conceive and started ANC very early. But on early starting ANC the women who didn't plan to get pregnancy they started ANC < 13 week perform well than who planned. This can either

be influenced by starting noticing body changes/ sick and starting to attending hospital for check-up.

The study reveals that there is no significant effect of woman who plan for pregnant on attending ANC 4+ and started ANC early, and PNC MHC utilisation base on p-value calculation as indicated in Table 7. But woman were more encouraged to plan for their pregnancy before because to know their health ability, child age interval, family preparation and diet intake.

Table 7: Pregnancy planning

Plan for your last pregnancy	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC>=1 3 (n=135)	p-value	PNC Visit>=3 (n=31)	p-value
No	71	71(100)	62(87)	0.39	56(79)	0.58	9(13)	0.14
Yes	105	105(100)	96(91)		79(75)		22(21)	

4.4.4 Number of births

The number of birth variables was investigated if it can show to influence on MHC services utilization. The findings in able 8 show that women who had births less than 5 births were 92% and who had above 4 births were 8%. The finding continues to present that, for those who had births less than five times delivered at the health facilities 100%, attended ANC 4+ were 90% and started ANC on time were 78% and 17% had PNC 3+ visits. While who had above 4 number of births were 100% and delivered at health facilities, 93% attended ANC 4 plus visits, 64% for who started ANC visit on time and 21% had PNC 3+ visits.

The findings show that those who attend ANC 4+ and had above 4 births been performing well than those who had below 5 births. On early starting ANC those whose number births were below 5 performed well than those who had number of births above 4 births. In general, number of births do not have significant influence on MHC service utilization by considering p-square result that there is no p-value less than 0.05.

Table 8: Number of births

Births	Freq	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
0 - 4	162	162(100)	145(90)	0.69	126(78)	0.25	28(17)	0.7
5 >	14	14(100)	13(93)		9(64)		3(21)	

4.4.5 Attending PNC with her partner

This study also wanted to know how women partners' attendance had influenced on women utilization of maternal health care services. The findings show that, whether husband accompanied their wives to attend MHC services or not, all delivered at the health facilities. Women who indicate that their partners did not accompany them during ANC visits comprised 87%. On the other hand, women who said their partners do accompany them more than 4 times to visits ANC clinic comprised 96% of the total respondents. On the other hand, those women whose husbands do not accompany them start ANC visits in time comprised 74% and those who accompanied by their partners comprised 82% of the total respondents. Women whose partners accompany them during PNC visits comprises 15% while those accompanied by their partners during PNC visit comprise 24% of the total respondents. The findings emphasis that most of partners didn't show their involvement on PNC which affect women on MHC utilisation. The result showed this variable have significant influence on women attending ANC 4+ but did not provide significant impact on delivery at health facilities, early starting ANC and PNC visits.

Table 9: Attending PNC with her partner

PNC with her partner	Freq	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
No	121	121(100)	105(87)	0.05	90(74)	0.28	18(15)	0.16
Yes	55	55(100)	53(96)		45(82)		13(24)	

4.4.6 Attending ANC with her partner

The study furthermore, aimed at knowing the influence of partners attendance during ANC and utilization of MHC services. In this respect, 30% of women indicated that their partners did not attend and 70% indicated their partners accompanied them. For those partners who did not attend, women attending ANC were 87%, while those whose partners participated. Women attending ANC comprised of 91%. On the other hand,

women attending in time during ANC visits comprised 76% whose partners don't participate, and women whose partners participate comprised 77% of the total respondents. Likewise, during PNC visits, 9% of women said their partners do not participate while 21% of women indicated that their partners attending during PNC visits to MHC services. As can be noted, there is significant difference in women visiting clinics during PNC when their partners attend (Table 10).

Some partners failed to attend ANC with their women because some of partners are husband of other woman legally, distance due to economic activities, separation and low men consideration on attending ANC.

Table 10: Attending ANC with her partner

ANC with her partner	Frequency	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	P-value	Start ANC >= 13 (n=135)	P-value	PNC Visit >= 3 (n=31)	P-value
No	53	53(100)	46(87)	0.39	40(76)	0.8	5(9)	0.05
Yes	123	123(100)	112(91)		95(77)		26(21)	

4.4.7 Residence

Place of residence is another important variable in this study in relation to MHC services utilization among women. Rombo District is largely in rural while Moshi is an urban center whereby substantial health facilities are concentrated ranging from dispensaries, health centres and referral hospitals. Most of the study participants live in rural areas (Rombo District) 60% while who lived at urban area (Moshi Municipal) was 40% of study participant. From this study the findings indicate all sample respondents had their deliveries in health facilities. However, as for as ANC 4+ visits 88% of rural women did so against 92% of urban women. On the other hand, 74% of the rural women and 81% of urban women had early starting ANC visits to the health facilities. Correspondingly 34% of urban centre made PNC visits against 6% for rural women. One can therefore say that residential location among women between urban and rural areas also determine the rate of PNC visits and maternal healthcare. Moshi municipality performed better on MHC utilization than rural areas probably be due to well established infrastructures, knowledge, education level and presence of many health facilities.

The findings from interviewed participants reported that;

“Being near the dispensary is of advantage, most of big hospitals are located

in urban areas which is far from our village and it costs woman from Rural area to reach there.....” (Interviewee, Keni Health Centre, 21/01/2021)

These findings are the same like the study by Fagbamigbe and Idemudia, (2017) in Nigeria which suggest that residence of women played a big role on adherence to MHC utilization . The women who lived in urban areas were more likely and experiencing high rate on MHC utilisation compare with those living outside urban areas. This can also be influenced to culture, social norms, education level, shortage of health facilities, insufficient health services provide and poor infrastructures, (Adewuyi *et al.*, 2018 and Yasuoka *et al.*, 2018). The qualitative results showed that those in the rural area stayed far away from the health facility compared to those in the urban areas who had easy access of transport.

Table 11: Residence

Residence	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC>= 13 (n=135)	p-value	PNC Visit>= 3 (n=31)	p-value
Moshi Municipal	74	74(100)	68(92)	0.43	60(81)	0.24	25(34)	0.001
Rombo District	102	102(100)	90(88)		75(74)		6(6)	

4.5 The economic factors that affect utilization of MHC services among women.

One of the objectives of the study was to investigate the economic factors influencing MHC utilization among woman. Economic factors are very important to be considered as other researchers have said that has a close relation with woman on MHC services utilization, Economic factors in this study include economic level of income, occupation, having health insurance and financial hardship among women in relation to access MHC services.

4.5.1 Level of income.

The study findings show that most of the respondents in this study are low income earners and possibly this is partly why many women attend these free MHC services facilities. The findings show that 78% of women earned between 0-Tsh 100,000 per month. About 19% earned between Tsh. 100,001 and Tsh 500,000, while 1.1% from Tsh 500,001 to Tsh. 1,000,000 and 0.5% earned above Tsh 1,000,000. These earnings scenario had bearing on how women use free MHC services. As most of participants who received MHC services from primary government health facilities mostly were

low income earners accounting for 78% and educated to primary school accounting for 51%. Possibly women attend to the health facility because are provided with free healthcare where they are supposed to pay for them if they go to private health centres.

The study revealed that above 87% of all women achieved ANC contacts 4+, above 70% stated ANC while on attending PNC 3+ women who earned less than Tsh 100,000, 100,001-500,000 and above 500,000 income only 15%, 24% and 50% respectively attending PNC 3+ visits, (Table 13).

This study analysis showed there is a close relationship between level of income and MHC utilization, as income increases also rate of MHC utilization increases too. Study findings from Sharma *et al.*, (2020) and Mumtaz *et al.*, (2021) showed that rich women were more on utilization of MHC which are opposite with poor quintile women who experienced low in MHC utilization. Also, majority of rural women who participated in this study pointed out distance and transport costs as their challenges on the use of MHC services. One of the participants pointed out that:

“We prefer health facilities to be very near to our residence but we incurred transport costs for us to reach to the health facilities, and when you are transferred to the big hospital the problem is worse....” (Interviewee, Keni Health Centre, 18/01/2021)

Table 12: Level of Income

Level of Income	Frequency	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC $> = 13$ (n=135)	p-value	PNC Visit ≥ 3 (n=31)	P-value
0 – 100,000	139	139(100)	88(64)	0.88	70(51)	0.21	15(11)	0.44
100,001 – 500,000	34	34(100)	31(91)		27(79)		8(24)	
500,001 – 1000,000	2	2(100)	2(100)		2(100)		1(50)	
1000,001 >	1	1(100)	1(100)		0(0)		0(0)	

4.5.2 Occupation

The occupation of women is among the variables of interest in this study. The findings of this study show that most of women (46%) are employed in small businesses. The jobless comprise 28% of the respondents, while 20% are farmers and only 6% are in formal employment. The findings show that with regard to occupation all respondent had deliveries in MHC services facility. However, ANC 4+ visits, ANC start and PNC

3+ visits vary according to occupation. Among farmer respondents ANC visits account for 89%, for business women 91% ANC visits, among jobless 88% of them visits ANC and those with formal employment 91% do so. On the other hand, early ANC start visits are 88% (jobless), 74% (Business women), 73% (formal employment women) and 69% (farmers). Generally, PNC visits 3+ is high among formal employed (36%), business women (18%) and farming women (9%). The farmer women seem to lag behind in terms of PNC visits, (Table 13)

There are some challenges observed for some women failed to have good rate on MHC utilization like others. The challenges like didn't plan to become pregnant, too old, feel shame, they didn't see if it is important to attend on time and other delayed to notice if they were pregnant, family work, level of education and opportunity costs is also among other factors. Generally, employed women seem to utilize very well MHC services provided in the health facilities than others. This can be due to income level, less opportunity cost and knowledge on MHC utilization, (Table 13).

Table 13: Occupation

Occupation	Frequency	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
Farming	35	35(100)	31(89)	0.75	24(69)	0.20	3(9)	0.12
Business	81	81(100)	74(91)	0.51	60(74)	0.45	15(19)	0.77
Jobless	49	49(100)	43(88)	0.60	43(88)	0.03	9(18)	0.87
Employed	11	11(100)	10(91)	0.89	8(73)	0.75	4(36)	0.9

4.5.3 Medical Insurance

It was also important to know the influence of medical insurance coverage on MHC services utilization. In Tanzania medical insurance coverage is still very insignificant especially in rural areas. Research findings indicate that, out of 176 respondents, only 29 respondents accounting to 16.4% had medical insurance coverage, the rest which is about 73.6% have no medical insurance coverage. Along this line, 93% of women with insurance coverage visited ANC 4+ visits and corresponding 89% of those without insurance cover visited ANC. On the other hand, 76% of women without insurance coverage started attending ANC on time and only 17% had PNC 3+ visits, (Table 14).

Quantitatively, the findings on the use of medical insurance regard to the utilization of the MHC services had no significant effect since ANC services were free and this was

evidenced in qualitative information where the women gave their views on how they are happy and comfortable in use of the Health facility services.

“No any challenges which women pass when they come to get service, there we get free service and no challenge You will come here at the clinic you have carried a baby or pregnant mother; is given free mosquito net, for sure it is for your own benefit as far as it has no any side effects on you” (Interviewees, Majengo Health Centre, 18/01/2021).

There were also extra services which accompany the free services offered in the Majengo health Centre facility in Moshi Municipality.

Table 14: Medical Insurance

Medical Insurance	Frequency	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >=13 (n=135)	p-value	PNC Visit >=3 (n=31)	p-value
Have Insurance	29	29(100)	27(93)	0.51	24(83)	0.40	6(21)	0.63
Don't Have Insurance	147	147(100)	131(89)		111(76)		25(17)	

4.5.4 Financial Hardship

The study sought to investigate financial challenges on MHC services utilization. Findings show that 21.6% participants experience difficulties on receiving MHC due to financial challenge and 78.4 participant didn't face any financial challenge on accessing MHC services at health facility. Those 21.6 participant experienced that difficulty only to those health facilities other than primary government health facility during accessing MHC services. All participants said that primary government health facility services are available when you are identified as pregnant whereby all MHC services will be freely provided to you.

The analysis showed that those participants experienced financial hardships, 90% attended ANC 4+, 76% started ANC on time and 8% attended PNC 3+ visits. While those who did not face financial hardships during accessing MHC at health facilities 90% attended ANC 4+, 77% timely ANC visits and 20% attended PNC 3+ visits. Participants who did not face financial challenge during accessing MHC services have good rate in utilization of MHC services than those who faced financial challenges. Most of the participants who faced financial difficulties are those who went to the private, district or referral hospitals where fee on accessing MHC services still exist.

Study from India Community by Sharma *et al.*, (2020), revealed utilization of maternal healthcare services was poor in the urban slums due to poor services including lack of facilities as compared to the national health services facilities. There were more utilization of maternal services from private sector even though the availability of the government services is available in the same community.

This is quite the opposite with the findings from this particular study where the qualitative findings show in primary government health facilities there was access of free maternal services. One woman who experienced the MHC was quoted saying

“For sure our dispensaries have enough equipment’s and supplies and all are used to treat our patients....Services from the clinic including the child examination test, giving vaccinations, contraceptives and all maternal services are available and are given for free” (Interviewee, Keni Health Centre, 21/01/2021).

Table 15: Financial Hardship

Financial Hardship	Frequency	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
No	138	138(100)	124(90)	0.96	106(77)	0.97	28(20)	0.08
Yes	38	38(100)	34(90)		29(76)		3(8)	

4.6 Cultural influence on free MHC services utilization among women.

4.6.1 Attending to traditional healers

This research also wanted to know whether women get the services of traditional healers instead of health facilities. The findings reveal that 10 respondents also sought the traditional healers. In spite of this, all respondents get their delivery service from health facilities, 100% of women still attend ANC 4+ visits, 90% started ANC visits within 12 weeks 40% attend PNC more than 3 times. While those who didn't attend traditional healers 100% delivery at health facility, 89% attended ANC 4+, 76% achieved starting ANC on time and 16% also achieved PNC visit 3+. It should be noted that even if some women consult traditional healers, finally the used MHC services provided from health facilities. The practice of consulting traditional healers is illustrated in Table 16.

Although some participant attended to traditional healers but was not significant if it

associates with poor utilization of MHC services in health facilities. The study also shows that the women who attended to the traditional healers had high rate on MHC utilization than those who did not attend to traditional healers. This can either influenced by some traditional healers already have knowledge for advising those women to go to the health facilities, or some women after being attended by traditional healers realize was unsafe place for MHC services rather than to go the health facilities and maybe there were few traditional healers in the community. Also it provide picture that some participant trust traditional healers for MHC management than going to the health centers.

Table 16: Attending to traditional healers

Attending to traditional healer	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >=13 (n=135)	p-value	PNC Visit >=3 (n=31)	p-value
No	166	166(100)	148(89)	0.27	126(76)	0.31	27(16)	0.06
Yes	10	10(100)	10(100)		9(90)		4(40)	

4.6.2 Attendance by male or female medical staff

There is the question of women being attended by both male and female staff at MHC services. The respondents view differs at various degrees. The findings indicate that 49% of women respondents indicated they can be attended to by any staff irrespective of sex, 23% preferred to be attended by female staff and 28% they preferred male staff. Each of the category had its reason for their preference. Those who preferred male staff, said that males are humble and provide more care. Those preferred female staff, it is because they share common identity and do not feel embarrassed and also due to religious reason.

According to Mahumud *et al.*, (2019) women prefer to be handled by female doctors than male and availablity of female doctor has significant influence on women receiving MHC services at helath facilities. Also study by Sarker *et al.*, (2016) and demostray that preference of women being served by female staff relates with culture and religion as most of participants were muslims which for them is violoation of religion rules. Other women did not prefer to share their complication and private information with male doctors. The study results show that Kilimanjaro women were happy to be treated by staff either male or female. But it was also noted that it is better to mix sex on allocation of health staff to the health facilities, (Table 17).

Table 17: Attendance by male or female medical staff

Attended by staff of which Sex	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=15)	p-value	Start ANC >=13 (n=13)	p-value	PNC Visit >=3 (n=31)	p-value
Anyone	87	87(100)	78(90)	0.76	62(71)	0.22	11(13)	0.06
Female	40	40(100)	37(93)		32(80)		12(30)	
Male	49	49(100)	43(88)		41(84)		8(16)	

4.6.3 Safe place for delivery

It was also useful to know the respondents take on safe place for delivery. The findings show that with the exception of one participant, 99% participants indicated that health services facilities are the safe most places for delivery. This is because all the participants had their delivery at health facilities and they acknowledged about the quality of the services they do receive from the health centers.

The above findings are in contrast with those Ntoimo *et al.*, (2019) who revealed that, some women prefer to deliver at traditional birth attendant (TBA) place. This is because, TBA are friendlier, they know them and they believed traditional herbal medicine are the best treatment during childbirth. Also, women believed who sustain mother and child during birth was not by receiving health care from the health facilities but was the God plan or wishes, (Ntoimo *et al.*, 2019). In line with this, some respondents observed that there is need to improve hospital infrastructure to entice women to appreciate MHC services facilities. One respondent said:

“I request government to provide maternal service in all times or these free services to be available all the time in the health care facilities for example drugs, vaccination, equipment and family planning services” (Interviewee, Keni Health Centre, 18/1/2021).

Table 18: Safe place for delivery

Safe place for delivery	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >=13 (n=135)	p-value	PNC Visit >=3 (n=31)	p-value
Health Facility	175	175(100)	157(90)	0.73	134(77)	0.58	31(18)	0.64
Traditional birth	1	1(100)	1(100)		1(100)		0(0)	

4.7 The health facilities influencing free MHC services utilization

4.7.1 MHC provided freely

From the study, it was revealed that, the majority of the respondents (93%) agree that MHC services provided free by government primary health facilities attract women to get their services, (Table 19). The rest (7%) did not agree with the above allegations. Those who agreed said that the removal of user fee will attract more women to use MHC products. This is evidenced 90% women made ANC 4+ visits, 77% early starting ANC clinic and 18% PNC 3+ visits. It should also be noted that even those who disagreed, the ANC 4+ visits reached 92%, early start for ANC 75% and PNC 3+ visits 8%. The findings do not show the significant difference among the three categories in relation to ANC visits, starting ANC and PNC visits.

The study provides the explanation that most of the participants preferred MHC services to be offered for free. Removal of charges reduces financial restriction for women to use MHC services appropriately and it increase access and utilization of MHC as emphasized by Lang'at and Mwanri, (2015). *Participants in Majengo Health Centre said:*

“...from first time I attend to health facility for checking my health status everything was for free, during attending clinic, tests, delivery and other services related on MHC were free but you are required to come with gauze/cotton for delivery but other items are provided by health facility”.
(Interviewees, Majengo Health Centre, 18/01/2021).

Table 19: MHC provided freely

MHC Provided freely	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >=13 (n=135)	p-value	PNC Visit >=3 (n=31)	p-value
No	12	12(100)	11(92)	0.82	9(75)	0.89	1(8)	0.38
Yes	164	164(100)	147(90)		126(77)		30(18)	

4.7.2 Delivery supplies requirements.

In Tanzania, it has almost been normal for health facilities to require expectant women to provide delivery supplies (cloves, gauze, pin etc). Thus, it was imperative to ask the respondents, whether they had experienced this phenomenon. The findings indicate that 82% of the respondents had been required to do so at various times and places. The rest (18%) of the respondents were not asked to do so. Of those who did not experienced

this, all 100% hold their delivery at health facilities, 91% had visited ANC 4+ visits, 78% had early ANC start and 25% had PNC visits. On the other hand those who had experienced this phenomena, all 144 delivery at health facilities, 90% visited ANC 4+, 76% had ANC visits early start and 16% had PNC visits 3+ (Table 20).

It implies that, the delivery supplies demanded by MHC management did not make much differences in both women MHC attendance or delivery. The delivery supplies demanded from expectant women from health facilities seem not to influence women from making use of MHC services. One woman had this to say:

“Women were asked to come with delivery supplies when they attended MHC service facilities, even if they cannot afford.....However, once they attend without delivery supplies, can use available supplies from the store in the health centres. Women are not happy with this practice, as it humiliates those who did not manage to come delivery supplies. Women complain that due to their low income and education, the ministry of health should provide delivery supplies for free”. (Interviewee, Majengo Health Centre, 21/01/2022).

Table 20: Delivery supplies requirements

Delivery supplies	Freq	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 1 3 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
No	32	32(100)	29(91)	0.86	25(78)	0.83	8(25)	0.23
Yes	144	144(100)	129(90)		110(76)		23(16)	

4.7.3 Satisfaction in Quality of Infrastructure

The study wanted to examine women’s satisfaction of the available health facilities infrastructure. Infrastructures which were considered are wards, place of delivering, toilets, waiting area, buildings and general health facility environment. Table 21 presents women views on the quality of the infrastructure as being either bad, good and very good. Most of the respondents (79%) said the infrastructures were good, 20% said very good and 1% indicated that the infrastructures are bad. As most of women said they are satisfied with the quality of infrastructures it shows the health facilities were in good condition and cannot discourage patients to access quality MHC services. The respondents who said the infrastructure was very good had high rate on MHC utilization than those who said the health facilities infrastructure were good. But those who said the infrastructure quality was bad, had high MHC utilization rate than the

rest. All of them delivered in health facilities, all of them had ANC 4+ visits and all of them attended ANC in time and 50% visited PNC. This is against those who said the infrastructure is very good whereby, 91% visited ANC 4+ time, 80% visited ANC in time and only 31% visited PNC 3+ visited, (Table 21).

According to Ngan *et al.*, (2016) showed that women were dissatisfied with MHC services provided at health facilities because of poor infrastructure which affect their ability to use MHC serves as recommended. But this study, provides chance to continue maintaining and improving infrastructure in order to attract more women to use health facilities as stated by one participant during an interview at Majengo Health centre that:” *she is satisfied with the way services are provided at health centre and she can recommend even others to attend the Majengo health centre for MHC services and for other health services.... she received mosquito net for free and other MCH related services*”. (Interviewees, Majengo Health Centre, 19/01/2021).

Table 21: Quality in Infrastructure

Quality of Infrastructure	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >=13 (n=135)	p-value	PNC Visit >=3 (n=31)	p-value
Bad	2	2(100)	2(100)	0.83	2(100)	0.63	1(50)	0.02
Good	139	139(100)	124(89)		105(76)		19(14)	
Very Good	35	35(100)	32(91)		28(80)		11(31)	

4.7.4 Mistreatment by staff

This study also wanted to know how women are treated in health facilities. The findings show that only 6% of respondents indicated that they have been subjected to mistreatment. In this regard, most of the women (82%) have attended ANC visits at least four time, 91% early started ANC visit and 9% had visited PNC 3+ visits. While those who had been treated well, 90% attended ANC 4+ visits, 76% early started ANC and 18% had visited PNC 3+ visits, (Table 22).

Agunwa *et al.*, (2017) explained that utilization of MHC services was attributed to perception of community toward health providers. In Uganda Alurs tribe women are not comfortable to go to the health facilities because of the embarrassment actions by staff, (Kiwauka *et al.*, 2008). But in this study, it is shown that most of staff have customer care skills and they handle patients well. Even though most reported not mistreated but few were reported to have mistreated which demand to continuously

educate staff and women to report when they are not treated well. Mistreatment can be reported to in-charge of health facilities, district medical officer, and regional medical officer or direct to the ministry of health if possible. This situation increases accountability, transparency and can immediately help in solving patients' complaints. This was put forward by one respondent that: "... when patients received health services in the health facilities, they are in good hands.... and there is no any mistreatment by the MHC staff. Moreover, MHC staff use very good language" (Interviewee, Keni Health Centre, 21/1/2021).

Table 22: Mistreatment by staff

Mistreatment by staff	Frequency	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >= 13 (n=135)	p-value	PNC Visit > =3 (n=31)	p-value
No	165	165(100)	149(90)	0.37	125(76)	0.25	30(18)	0.44
Yes	11	11(100)	9(82)		10(91)		1(9)	

4.7.5 Education provided at clinic

It was important to identify if general MHC education were provided during the clinic. This study used this variable to examine if education were provided at the clinic. Table 23 showed that 88% agreed that MHC education were provided during attending in the clinic while 12% disagreed that MHC education were provided at health facilities. As most of women agree MHC education were provided at health facilities it shows it was true and they add that education was provided before starting of the clinic, but those who came late missed that chance unless they ask the nurse or staff about specific issues.

Based on the statistics those who agreed MHC education was provided at health facilities had high rate on MHC utilization than those who disagreed as per Table 23. This finding relates with question about where MHC information is obtained and most of the respondents said at the health facilities. Most of the participant had primary education and limited skills about MHC. The education provided at health facilities increases awareness of women about MHC services, dangerous signs, balanced diet and general mother and child health protection.

This was said by mothers who were attending clinic that they used to get education when they arrive at the health clinic. One woman gave her testimony that

"For sure we are satisfied with health education given in this health center"

concerning the maternal health care services. This education is provided daily on working days before clinic starts. Every woman or couple who attends the clinic are required to pay attention during the general MHC education. Knowledge which is shared include family planning, things to consider when you are pregnant, diet, follow up, good health, bad sign and attending the clinics frequently” (Interviewees, Keni Health Centre, 21/1/2021).

Table 23: MHC Education

MHC Education	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >= 13 (n=135)	p-value	PNC Visit >= 3 (n=31)	p-value
No	22	22(100)	20(91)	0.85	15(68)	0.31	2(9)	0.26
Yes	154	154(100)	138(90)		120(78)		29(19)	

4.7.6 Attending Health facility for pregnancy planning

It was also important to know whether women attend health facilities for pregnancy planning before being pregnant and its relation on MHC utilisation. The result showed most of women did not attend to the health facilities for pregnancy planning which can affect their possibilities of effectiveness on MHC utilisation. Some women noticed their pregnancy without expecting or planning to become pregnant which also affect them on MHC utilization. Table 24 shows that women who are attending at health facilities for pregnancy planning before being pregnant they achieved well on MHC utilization than those who didn't attend at health facilities for pregnancy planning. Study indicate that 71.5% of women were not attending to health facility for pregnancy planning. However, all of them had their delivery at a health facility together including those women who attended for pregnancy planning.

During ANC visits 87% of women did not attended to the health facilities for pregnancy planning while those who attended at health facilities for pregnancy planning comprised 98% of the total respondents. The corresponding figures for early start ANC were 75% of women who are not attending pregnancy planning and 81% for women who attend pregnancy planning. On the other hand, women who are not attending pregnancy planning on PNC 3+ visits comprised 17% in their category while those attending for pregnancy planning comprised 20% in their category. Generally, although there is significant differences, women who attending health facilities for pregnancy planning are likely to use MHC services at health facility more than those without planning, (Table 24)

Table 24: Attending Health facility for pregnancy planning

Attending Health facility for pregnancy planning	Freq	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	P-value	Start ANC >= 13 (n=135)	P-value	PNC Visit >=3 (n=31)	P-value
No	126	126(100)	109(87)	0.02	95(75)	0.52	21(17)	0.6
Yes	50	50(100)	49(98)		40(80)		10(20)	

4.8 Free services offered during MHC services

4.8.1 Provision of free MHC services Information

In any programme or project, information is vital for the target population to achieve its objective. In this study it was revealed that, 87% of the respondents had access to information on MHC services and that it is provided free. The rest 13% of the respondents had no access to information even though all respondents had delivered in the health facilities. It is interesting to note that, those who said they had no MHC information had full ANC visits and 85% ANC visit for those with MHC information. On the other hand, early ANC start stands at 96% for respondents without information and 74% for their counterparts. The women without information had more visits to PNC at 30%, while their counterparts (16%) visited PNC, (Table 20). The study shows that there is significant evidence information about MHC services provided free and time of starting ANC.

Table 25: Provision of free MHC information

Information on MHC provided free	Fre q	Health facility delivery (n=176)	ANC Visit >=4 (n=158)	p-value	Start ANC >=13 (n=135)	p-value	PNC Visit >=3 (n=31)	p-value
No	23	23(100)	23(100)	0.08	22(96)	0.02	7(30)	0.83
Yes	153	153(100)	135(85)		113(74)		24(16)	

4.8.3 Free MHC increase access and use of MHC services

The other area of interest was to find out whether free MHC services increase access to use the MHC products. The majority of the women (78%) agreed that free MHC services attract women to go to the MHC services at health facilities. Only 2% of the respondents disagreed. All those who disagreed, however had their delivery at health facilities, all visited ANC 4+, 75% had early start in ANC visits and none visited PNC 3+. As usual, for their counterparts, all had delivery at health facilities, 90% ANC 4+ visits, 77% did so in time started ANC and only 18% visited PNC 3+ times. Other

studies show that user fee had been a challenge for accessing MHC services, (Nguyen *et al.*, 2018). Thus, the removal of MHC user fee or its abolition, has increased women access and use of MHC services, (Calhoun *et al.*, 2018).

Table 26: Free MHC increase Access and use of MHC services

Free MHC increase Access and use of MHC services	Freq	Health facility delivery (n=176)	ANC Visit ≥ 4 (n=158)	p-value	Start ANC ≥ 13 (n=135)	p-value	PNC Visit ≥ 3 (n=31)	p-value
No	4	4(100)	4(100)	0.50	3(75)	0.94	0(0)	0.35
Yes	172	172(100)	154(90)		132(77)		31(18)	

4.8.4 Services provided freely

The study also went through which MHC services provided free at government health facilities. The findings come from MHC staff. The services like ultrasound, laboratory tests, pregnancy test, delivery, ward services, immunization, medicines which are available at the primary health facilities and consultation services. Testimony from one of the staff in Keni health center that:

“The problem of services are accompanied with the availability of services within the time frame; when they bring drugs, it means all drugs are available but sometimes drugs are not available and there are other investigations and examinations not available in this dispensary” This relates to the study from India where maternal services in the community health facilities could not meet the needs of the maternal Health services, (Sharma *et al.*, 2020).

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study examined utilization of free maternal health care among women, provided by primary government health facilities. The main objective of the study was to examine the factors influencing utilization of the free maternal healthcare services in the government primary health care facilities. The study was conducted in Moshi Municipal and Rombo District in Kilimanjaro, Tanzania.

5.2 Conclusion

The social factors identified to be contributing to MHC utilization in Kilimanjaro primary government health facilities include education level, marital status, family planning, number of births, collaboration with partner on MHC services and residence urban versus rural. As education increases, also the rate of MHC utilization rate increases. This increase can be highly influenced by awareness of MHC utilization and risks among women. Another factor is marital status, where by most of women who live with their partners were found performing better on MHC utilization than those live alone or cohabitated. This can be associated with influence of partner on adherence to MHC utilization. Women who collaborates with her partner on attending ANC and PNC clinic were found to have a good maternal health care utilization than otherwise. Even though few men attend clinic with their partners, it has been shown that women who went to the clinic with their partners have better chance on good adherence to MHC utilization requirement than those men who refused. Some men felt awkward to go to clinic, they don't like discussing MHC issues as if they were not part of the game. This situation affects women on use of MHC at health facilities effectively.

Economic factor identified to influence utilization of MHC services at primary government health facilities is level of income. As level of the income increases, the rate of MHC utilization also increases. Women who have low income, their rate of MHC utilization is not good compared with those with high incomes. This can either be failure to meet transportation costs or concentrating with other activities for more income generation. Other factors were occupation of women. Most of women (46%) were dealing with small business, others were jobless (28%) and involved in farming (20%). Employed women were performing better on MHC utilization than other categories like small business, farming and those who are jobless.

Women employed in formal sector performed better because of their level of education, as they had assurance of their income, but those who are not employed, consider opportunity cost either to work or going to health facilities. The other factor was having medical insurance. Few women (16%) have medical insurance and were observed to have high rate of MHC utilization than those who do not have medical insurance. Possessing medical insurance, needs fee to pay in order to own that cover. Having health insurance increases confidence to women at any time to go to the hospital even to the district and referral hospitals.

The study also sought to determine the influence of cultural believes factors on utilization of MHC services. The factors include attending traditional healers and places they trust for MHC services. In our study, we found out that, most of women in the study do not visit traditional healers, except a single digit case accounting to 6%. Only one case has trust in traditional healers. Thus, cultural factors seem not to impact women to use MHC services in health facilities.

The study revealed that 87% of women are aware of free MHC services, and the rest 13% were not aware of the existence of free MHC services. The findings indicate that whether women are aware or not, the attendance at MHC remain the same for both categories of women. However, there may be a loophole for un-trustful staff to take the advantage of ignorant women on the existence of free MHC services.

The other area of interest was to know whether removal of scrapping fee will increase women use of MHC services. Most of the women (93%) said that such a move will definitely increase women attendance to get the services, and only 7% did not agree. Those who agreed expressed that the removal of fees will also help women to access free consultation, testing, immunization and delivery services. Other services that could also be freely accessed including consultation with physician, laboratory test, radiology and ward accommodation.

Most women face challenge of low knowledge on MHC services, uncooperative nature of their partners as their men felt that MHC services is not important for them. Other challenges include unreliable source of income, shortage of health services providers at dispensaries mostly in rural areas. Sometimes some services like drugs and vaccination are not available which force women to go to other health facilities.

Challenges also include ambulance services particularly when a referral is required for a complicated delivery.

5.3 Implications and Contribution of the Study

5.3.1 Contribution to health policies and strategies.

The study adds some information to the Tanzania's policies and strategies in the following areas as follow:

(i) 2017 Health Policy

This policy aimed to improve reproductive and maternal health care delivery services. The study showed number and rate of women access to MHC services for ANC, institutional delivery and PNC has increased. The study has indicated improvement, but on PNC and time of starting ANC the performance was not good enough which needs improvement strategy. Male involvement in MHC attendance was still low especially at rural areas than in urban centres.

(ii) The 2015-2020 Health Sector Strategic Plan IV

This plan aimed to ensure universal access to sexual and reproductive health services. It aimed to facilitate primary healthcare facility to provide quality MHC services by having essential medicine and vaccine supplies, equipment, infrastructures also advocating community to use health facilities services like family planning, ANC, delivery and PNC services. From this study the participants seem to be satisfied by quality of services provided, infrastructures, customer care but they insist on rural dispensaries to increase number of staff and other needful services. Attaining universal sexual and reproductive health services cover at primary health facilities for MHC services as target of health sector strategic plan IV 2015-2020 and SDG-3 was achieved. All MHC services were free and participants have enjoyed it and has increased attendance rate to them in the process of getting health facilities which previously was among the limiting factors.

(iii) The national road map strategic plan to improve reproductive, maternal, newborn, child and adolescent health in Tanzania (One plan II 2016-2020). From this road map, it was targeted to achieve targets as presented in table below;

Table 27: One plan II 2016-2020 target

Indicator	Baseline value TDHS 2010	Target by 2020	Study findings 2021
ANC 4+ Visits	43%	70%	90%
ANC before 12 weeks	15%	40%	77%
Delivery at health facility	79%	90%	100%
PNC 3+ Visits	4%	20%	18%

By comparison, One Plan II 2016-2020 target by 2020 and study finding indicated improvement in Kilimanjaro region on ANC 4+ visits, early ANC start and delivery at health facilities while PNC 3+ visits showed target has not been achieved. There is a need for advocacy and provision of more knowledge to the community to attend PNC as recommended by the ministry of health and WHO.

The study analysed the factors influencing utilization of maternal health care. It was revealed that education level, information of MHC service were free, women attending health facilities for pregnancy planning and quality of infrastructure was mostly observed to influence MHC utilization in Kilimanjaro region. Generally social, economic and health facility factors were found to impact on rate of MHC utilization in the study area. The finding supports previous studies which looked on factors influencing ANC, PNC and health facilities delivery, (Orwa, *et al.*, 2019; Nuamah *et al.*, 2019; Okpala *et al.*, 2019; Owit *et al.*, 2018; Mohamud, 2018; Obi *et al.*, 2017; Ngan *et al.*, 2016, and Banik, 2016). Therefore, the selected Moshi Municipal and Rombo District are now documented as a part of literature on the matters related to factors influencing utilization of MHC services. The study findings provide facts and support materials for policy developers, decision makers and interested parties in improving MHC services by increasing MHC coverage, community awareness on MHC, accessibility and adherence of MHC recommendations which serving disabilities, mother and child deaths.

5.4 Recommendations

In light of the findings and the conclusion drawn, the following recommendations are put forward to improve maternal health care utilisation: The findings call for community-based interventions by creating awareness on MHC, especially among women with no/low education and women in rural and remote areas. Efforts should be made to strengthen the use of health facility for family planning, early starting ANC, ANC 4+ attendance, health facility delivery, PNC 3+ visits and male involvement on MHC services. The education or advocating MHC services can either be done from

primary school, secondary school, through different medias like radio, televisions, public announcements and by using political fora. This step can assist women to attend up to 8+ ANC contact as recommended by WHO.

Empowering women on economic activities due to their low income so as to be able to meet cost of life on different basic needs is imponderable. Women need to meet daily food diet, out of financial stress, to afford to reach to the health facilities, cost for caring baby after birth and keep out from heavy duties. Improving health infrastructures, increasing number of personnel, training and seminars for health staff, supplies and medicines and ensuring services are closer to the community especially at rural areas. Rural areas were more affected by transportation infrastructures, quality of health facilities infrastructures and health facilities closeness to the community are not yet close. Strategies should be on place and new innovations and ideas in terms of how to provide sufficient services in remoted areas for example by using mobile clinic services and outreach services by specialist gynecologist can help participants to use services.

Lastly increasing women accessibility to health facilities at any time and at any health facilities. Free services at primary health facilities are not enough but if each family should have health insurance will be much better. There is a need for universal health cover to all on accessing MHC services. Most of the participants don't have health insurance package which can affect them when required to attend at referral hospital, or individuals demand to go to referral hospitals are affected by cost of accessing health services. Health insurance should be mandatory for all, this saves life of many disables and it influences patients' early attendance to health facilities for diagnostics, investigation and consultation before problem go worse.

5.6 Area for further research

This study aimed at determining the factors influencing utilisation of free maternal health care utilization in Kilimanjaro, Tanzania. It is suggested that a comparable qualitative study be undertaken in other areas in Tanzania to see if there will be a compatibility of the findings or if there will be some variations. Specific recommended areas can be like male involvement on MHC services or community knowledge of MHC services

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APPENDICES

Appendix 1: INFORMED CONSENT

Greeting,

I am Gilbert M. Shao undertaking this research as partial fulfillment of the requirements for the award of Master of Business Management of Moshi Co-operative University (MoCU). I am conducting a research study on, “FACTORS INFLUENCING UTILIZATION OF FREE MATERNAL HEALTHCARE EVIDENCE FROM PRIMARY GOVERNMENT HEALTH FACILITIES IN KILIMANJARO REGION”.

This text is about your consent to participate in this important research.

Why are we doing this research?

We are doing this research to assess factors influencing utilization of free maternal healthcare services in government primary health care facilities in Kilimanjaro Region which is expected to contribute to the improving of maternal healthcare services.

Confidentiality

All the information and results that will be obtained from this study will be private and will be used for this study purpose only. The form will be written your name, unique identification numbers and your mobile phone number will be used for confidential matters and consultation for clarification.

Your participation is voluntary, you are free to ask questions. Take time, you need to make your choice. If you want to be in the research after we talk, please respond to the question below. You will write your signature too. This shows we discussed about the research and that you agreed to take part.

Name of participant

Signature of participantDate.....

Phone number of participant

Name of the interviewer (researcher)

Signature of the interviewerDate

.....

Phone number of the interviewer.....

DATA COLLECTION SHEET FOR MATERNAL HEALTHCARE UTILIZATION

Identification number.....

Date.....

PART A. SOCIAL DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

1. What is your age..... and year of your last birth.....
2. Your religion?
 - a. Muslim
 - b. Christianity
 - c. Traditional
 - d. d. None
3. Your occupation
 - a. Farming
 - b. Trading/Business.
 - c. Employed
 - d. Casual work
 - e. d. Jobless
4. Marital status
 - a. Single
 - b. Separated
 - c. Married
 - d. Widow
 - e. Divorced
 - f. f. Living together
5. Residence

District.....

Village/street
6. Name of health facility you use for maternal healthcare
7. Formal education level
 - a. Primary
 - b. Tertiary
 - c. Others

- d. Secondary
- e. None

PART B: SOCIO-ECONOMIC AND CULTURAL FACTORS ON MHCU

8. What is the time you used from home to health facility? Minutes
9. Whom do you live with?
 - a. Spouse
 - b. Parents
 - c. relatives'
 - d. friends
 - e. Alone
10. How much do you earn per month: Tsh
11. Do you have power to use family economic resources or spending decision?
 - a. Yes
 - b. No
12. Which medical insurance cover do you have?
 - a. NHIF
 - b. CHF
 - c. Others
 - d. d. None
13. Where do you obtain MHC information or knowledge?
 - a. From parents and relative
 - b. Health facility
 - c. School
 - d. d. Medias (radio, TV, gazette etc
14. Did you plan for your last pregnant?
 - a. Yes
 - b.No
15. Did you attend to health facility for family/pregnant planning before being pregnant?
 - a. Yes
 - b. No

16. Even once did you attend to traditional healers for MHC advices or management?

- a. Yes
- b. No

17. Do you attend ANC with you partner at least once?

- a. Yes
- b. No If No why?

.....
.....
.....

18. What the reason to attend at government health facility for MHC services (multiple answers)

- a. Close to home
- b. Referred from health facility
- c. Less expenses
- d. Reference from relatives/friends
- e. No charges
- f. Better quality of services

19. How long was your pregnancy when you started attending ANC? Week of.....

20. If your first attendance for ANC was after 12 week means you delay. Why delays

.....
...

21. What cause you to start/ attend ANC?

- a. I was sick.
- b. I know is my responsibility to go
- c. I told with my family/relative

22. How many times you attend ANC until childbirth?

23. Refer no. 22; If below <4 times Mention the reason

.....

Where delivery took place for your last child birth?

- a. Home
- b. Faith base organization health facility
- c. Government health facility
- d. Private health facility

24. Which method did delivery of your last birth?
- a. Normal method
 - b. C-section method
25. Where you believe for delivery is safe for you and your child
- a. Traditional birth attendant's
 - b. Health facility
26. How many births you have.....?
27. Do you experience maternal complication?
- a. Yes
 - b. No
28. How many time you attend PNC visit within 6 weeks after delivery?
29. Do you attend PNC with you partner at least once?
- a. Yes
 - b. No
30. Do you preferred to be attended by which doctor/nurse staff for MHC services?
- a. Male staff
 - b. Female staff
31. Do you know under using MHC services provided by health facilities can lead to your health and child high risk of disease, morbidity and even dearth due to maternal complications?
- a. Yes
 - b. b. No
32. Please mention any cultural belief you see hinder you to use MHC effectively?
- a) Religion
 - b) Lack of decision power
 - c) Tribe belief d. Ancestry believes
 - d) Home responsibilities
 - e) d None

PART D. FREE USER FEE, HEALTH FACILITY AND MHC UTILIZATION

33. Is it all services of MHC provided freely?
- a. Yes
 - b. No
34. Did you have information of which MHC services are provided free?
- a. Yes
 - b. No
35. Refer No 35 if the answer is no, do you have information of those charges/costs before?
- a. Yes
 - b. No
36. Which services you are required to pay on accessing MHC service?
- a. Laboratory
 - b. Consultation fee
 - c. Supplies
 - d. Delivery charges
 - e. Radiology
 - f. Drugs
 - g. Admission at ward charges.
37. Do you face challenge for not receiving sufficient care because of financial hardship?
- a. Yes
 - b. No
38. MHC provided free to Government primary health facilities increase women to access and use of MHC services?
- a. Yes
 - b. No
39. Does MHC general education provided at you facility to all women attending clinic?
- a. Yes
 - b. No
40. How is the accessibility of emergency MHC
- a. Very poor
 - b. Moderate

- c. Very good
 - d. Poor
 - e. d. Good
41. Do you face mistreatment by any health staff during accessing MHC services?
- a. Yes
 - b. No
42. The infrastructures appeared on good quality as you expected?
- a. Very good
 - b. Good
 - c. Bad
 - d. Very bad
43. Are you satisfied on how maternal health care are provided at your facilities?
- a. Very good
 - b. Good
 - c. Bad
 - d. Very bad
44. During delivery are you required to come with delivery supplies like gloves, disinfectants items, needles, gauze etc.
- a. Yes
 - b. No

Appendix II. INDEPTH INTERVIEW FOR WOMEN

- What challenges women face on accessing maternal care?
- Do you wish to recommend others to attend maternal health care at the facility you use?
Why wishing to recommend. If not why not wish to recommend
- What factors you experienced which you think affect women using free government maternal care?
- Do you know why some women delay initiating maternal health care during pregnancy?
- Does standard of health facilities favour women to seek MHC comfortable?
- Has any belief in your area hindered the effective utilization of MHC?

Appendix III. IN DEPTH INTERVIEW FOR MATERNAL HEALTH STAFF

- Do you have enough qualified personnel to handle maternal care? *what are their responsibilities*
- What is the quality of services offered waiting area drugs and supplies?
- Is there any improvement in hospital infrastructure such as maternal wards, ultrasound, operation theatre, ambulance, generator, blood bank and laboratory?
- Do you experience any financial difficulty in running maternal care services?
- Which services are freely provided? Are they available all the time?
- How do you monitor maternal education provided to women?
- What is your suggestion on how to improve utilization of maternal healthcare?

Appendix IV: Proposed Budget

No	Particulars	Description	Calculation	Amount Tsh
1	Stationeries	Questionnaires	1,085 copies X 100 Tsh/copy	108,500
		Dissertation printing	6 books * 50pages x 100Tsh/ page	30,000.00
		Report printing	6 books X 95 X100 Tsh/page	57,000.00
	Sub total			195,500.00
2	Personnel	Dissertation & reporting writing		-
		Field assistance	3 staff X 10,000 Tsh X 30days	900,000.00
		Data clearing, translating, transcribing and analysis of data	2 staff @ 175,000 Tsh	350,000.00
	Sub total			1,250,000.00
3	Communication	Phone calls	30days @ Tsh 5000 (5 staff)	150,000.00
		Internet	30days @ Tsh 2000 (5 staff)	60,000.00
	Sub total			210,000.00
4	Transport	Trip to Rombo & Moshi urban go and return	5000Tsh X 5 staff X 30 days	750,000.00
	Sub total			750,000.00
5	Meals	Participant refreshment	5000Tsh x 215 participant	1,075,000.00
		Meals	7,000 Tsh X 5 staff x 30days	1,050,000.00
	Sub total			2,125,000.00
	TOTAL COSTS			4,530,500.00

CRERC FORM 07



KILIMANJARO CHRISTIAN MEDICAL UNIVERSITY COLLEGE

(A Constituent College of Tumaini University Makumira)

P. O. Box 2240, MOSHI, Tanzania.

RESEARCH ETHICAL CLEARANCE CERTIFICATE

No. 2485

Research Proposal No. 1273

Study Title: Factors influencing utilization of free maternal health care ;evidence from primary government health facilities in Kilimanjaro region

Study Area : Kilimanjaro region

PI's Name : Gilbert Medard Shao

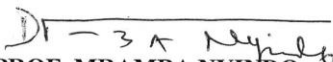
Coinvestigators: Alban Mchopa, Blandina Mmbaga and Perry Msoka

Institution (s) : Kilimanjaro Christian Medical University College

The Proposal was approved by CRERC on : 19th October, 2020

Duration of Study : One year

From : 19th October, 2020 to 18th October, 2021


PROF. MRAMBA NYINDO
Chair – CRERC


PROF. EPHATA KAAYA
Provost-KCMU College

GILBERT MEDAD SHAO
P.O.BOX 2236
MOSHI

KATIBU TAWALA
MKOA WA KILIMANJARO
KILIMANJARO

YAH: KUOMBA KIBALI CHA KUFANYA UTAFITI

Naomba rejea kichwa cha habari hapo juu. Mimi Gilbert M. Shao mwanafunzi wa chuo kikuu cha Ushirika Moshi (MoCU) ninayesome shahada ya uzamili. Ninaomba kupatiwa kibali cha kufanya utafiti kama matakwa ya kumaliza shahada yangu ya uzamili.

Jina la utafiti "*FACTORS INFLUENCING UTILIZATION OF FREE MATERNAL HEALTHCARE; EVIDENCE FROM PRIMARY GOVERNMENT HEALTH FACILITIES IN KILIMANJARO REGION*"

Eneo litakalohusika: Wilaya ya Rombo na Moshi Manisipaa

Vituo vitakavyohusika: Vituo vitatu kila wilaya (Rombo na Moshi Manisipa) vya serikali vya Zahanati na vituo vya afya

Muda utakaoitajika ni Mwaka mmoja November 2020 mpaka October 2021

Nimeambatanisha barua ya chuoni, cheti cha maadili ya utafiti na research proposal.

Natumaini ombi langu litafanyiwa kazi. Ni mimi katika ujenzi wa taifa letu



Gilbert Shao

**MOSHI CO-OPERATIVE UNIVERSITY (MoCU)
CHUO KIKUU CHA USHIRIKA MOSHI**

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Our Ref. No: MoCU/UGS/3/41

Date: 09 Septemba, 2020

Your Ref. No:

Katibu Tawala,
Mkoa wa Kilimanjaro,
KILIMANJARO.

**YAH: KIBALI CHA KUFANYA UTAFITI KWA WANATAALUMA NA WANAFUNZI WA CHUO
KIKUU CHA USHIRIKA MOSHI (MoCU)**

Madhumuni ya barua hii ni kumtambulisha kwako **Ndugu Gilbert Medard Shao** mtafiti/mwanafunzi wa Chuo Kikuu cha Ushirika Moshi ambaye kwa sasa anatarajia kufanya utafiti katika eneo lako.

Maombi haya yamezingatia Waraka wa Serikali wenye Kumb. Na. MPEC/R/10/1 wa tarehe 7 Julai, 1980 pamoja na Hati Idhini ya Chuo Kikuu Cha Ushirika Moshi (MoCU). Moja ya majukumu ya Chuo ni pamoja na kufanya utafiti na kutumia matokeo ya tafiti hizo katika kufundishia. Aidha, wanafunzi hufanya utafiti kama sehemu ya masomo yao wakiwa Chuoni.

Ili kufanikisha utekelezaji wa tafiti hizo, Makamu wa Mkuu wa Chuo hutoa vibali vya kufanya utafiti nchini kwa wanafunzi, waalimu, na watafiti wake kwa niaba ya Serikali na Tume ya Sayansi na Teknolojia.

Hivyo basi, tunakuomba umpatie mwanafunzi/mtafiti aliyetajwa hapo juu msaada atakaohitaji ili kufanikisha utafiti wake. Gharama za utafiti atalipia mwenyewe. Msaada anaohitaji ni kuruhusiwa kuonana na viongozi na wananchi ili aweze kuzungumza nao na kuwauliza maswali aliyo nayo kuhusiana na utafiti wake.

Madhumuni ya utafiti wa mwanafunzi/mtaalamu aliyetajwa hapo juu ni: **"Factors Influencing Utilization of Free Maternal Healthcare: Evidence from Primary Government Health Facilities in Kilimanjaro Region"**

Sehemu atakazofanyia utafiti huo ni: **KILIMANJARO.**

Ikiwa kuna Sehemu ambazo zinazuiliwa, ni wajibu wako kuzuia zisitembelewe.

Muda wa Utafiti huo ni kuanzia tarehe **09/09/2020** hadi **09/09/2021**.

Ikiwa utahitaji maelezo zaidi tafadhali wasiliana nami.

Wako katika ujenzi wa Taifa,


Prof. Alfred S. Sife
MAKAMU MKUU WA CHUO

Nakala kwa: Mtafiti



*Vision: To become a Centre of Excellence in Co-operative Education and Practice
Centre of Excellence in Co-operative and Business Management Training of the East Africa Community (EAC)*

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

MKOA WA KILIMANJARO
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 Simu Na. Moshi 255(027) 2754236/7
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OFISI YA MKUU WA MKOA,
 S.L.P.3070,
MOSHI.

Unapojibu tafadhali taja:

Kumb. Na. DC. 109/228/01 "A"/32

10/11/ 2020

Mkurugenzi,
 Halmashauri ya Wilaya ya Moshi
 S.L.P. 3003,
MOSHI.

Mkurugenzi,
 Halmashauri ya Wilaya ya Rombo,
 S.L.P
ROMBO.

Yah: **KUMTAMBULISHA NDUGU GILBERT MEDARD SHAO AMBAYE
 NI MWANAFUNZI WA CHUO KIKUU USHIRIKA MOSHI.**

Tafadhali rejea mada tajwa hapo juu.

2. Ofisi ya Katibu Tawala Mkoa imepokea barua ya tarehe 09/09/2019 kutoka kwa Ndugu Gilbert Medard Shao ambaye ni mwanafunzi wa shahada ya uzamili katika kitengo cha "Business Management of Moshi Co-operative University". Barua ilihusu kuomba kufanya utafiti unaotambulika kama "**Factors Influencing Utilization of Free Martenal Health care: Evidence from primary Government Health facilities in Kilimanjaro Region**".
3. Utafiti huu umekusudiwa kufanyika katika Halmashauri ya Manispaa ya Moshi na Wilaya ya Rombo kuanzia tarehe 09/09/2020 hadi 09/09/2020.
4. Kwa barua hii ninaiomba Ofisi yako itoe ushirikiano wa kutosha katika kufanikisha utafiti huu ikiwa ni sehemu ya hitaji kuu katika kufanikisha masomo yake.



JAMHURI YA MUUNGANO WA TANZANIA

OFISI YA RAIS TAWALA ZA MIKOA NA
SERIKALI ZA MITAA (TAMISEMI)



HALMASHAURI YA MANISPAA YA
MOSHI

Unapojibu tafadhali taja:

Kumb. Na. MMC/A.40/13/1/VOL.V/191

Tarehe: 22/12/2020

Ofisi ya Mkuu wa Mkoa,
S.L.P. 3070,
MOSHI

YAH: KUOMBA KIBALI CHA KUFANYA UTAFITI

Tafadhali rejea barua yako yenye Kumb. Na. DC.109/228/01"A" ya tarehe 10/11/2020 ikieleza mada tajwa hapo juu.

2 Kwa barua hii kibali kimetolewa kwa **Ms. Gilbert Merdard Shao** ambae ni Mwanafunzi wa shahada ya uzamili katika Kitengo cha "Business Management of Moshi Co-operative University" Kufanya utafiti kuhusu "**Factors Influencing Utilization of Free Martenal Health care: Evidence from primary Government Health facilities in Kilimanjaro Region**" Utafiti huu ulitakiwa kuanza tarehe 09/09/2020 hadi tarehe 09/09/2021.

3 Nakutakia kazi njema


Samwel W. Msumary
Kny: **MKURUGENZI**

Nakala: Mkuu wa Idara
Idara ya Afya
MANISPAA YA MOSHI


Tafadhali mpokee

: Ms. Gilbert Medard Shao
MWANAFUNZI

HALMASHAURI YA WILAYA YA ROMBO

(Barua zote zitumwe kwa Mkurugenzi Mtendaji)

Simu Na:027-2757101/102
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mkurugenzi@rombodc.go.tz



Ofisi ya Mkurugenzi Mtendaji,
S.L.P. 52
Mkuu – Rombo.

05/01/2021.

Kumb. Na.MDB.31/2/41

Mganga mfawidhi
Kituo cha afya/ Zahanati

S.L.P 223
MKUU- ROMBO


**YAH: KUMTAMBULISHA NDUGU GILBERT MEDARD SHAO AMBAYE NI
MWANAFUNZI WA CHUO KIKUU USHIRIKA MOSHI**

Tafadhali husika na somo tajwa hapo juu.

Gilbert Medard Shao ni mwanafunzi wa shahada ya uzamili katika kitengo cha "Business Management of Moshi Co-operative university" anakusanya taarifa za utafiti unaohusu "**Factors Influencing Utilization of Free Maternal Health care: Evidence from primary Government Health facilities in Kilimanjaro Region**". Utafiti huu unaanza tarehe ya barua hii hadi tarehe 09.09.2021.

Kwa barua hii, naomba umpokee na kumpa ushirikiano ili aweze kufanya utafiti huo. Aidha mwanafunzi huyo atatakiwa kuzingatia sheria na maadili ya tafiti kinyume na hapo utasimamishwa muda wowote.

Natangeliza shukrani kwa ushirikiano wako.


Dkt. Cornelio Mmanga
Kny: Mganga mkuu (H/W)
ROMBO

**MGANGA MRUU (W)
ROMBO**

Nakala:
Mkurugenzi Mtendaji (H/W)
ROMBO

-Aione kwenye jalada.

Gilbert Medard Shao

- utapaswa kuzingatia sheria na taratibu za tafiti.