Pregnant women’s access to maternal health information and its impact on healthcare utilization behaviour in rural Tanzania

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A Doctoral Thesis Submitted In Partial Fulfilment of the Requirement for the Award of Doctor of Philosophy

By:
Hilda A. Mwangakala

Centre for Information Management
School of Business and Economics
Loughborough University
United Kingdom
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>ANC</td>
<td>Antenatal Care</td>
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<tr>
<td>ARV</td>
<td>Antiretroviral</td>
</tr>
<tr>
<td>CHW</td>
<td>Community Health Worker</td>
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<tr>
<td>CKW</td>
<td>Community Knowledge Worker</td>
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<tr>
<td>CO</td>
<td>Clinical Officer</td>
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<tr>
<td>DMO</td>
<td>District Medical Officer</td>
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<tr>
<td>E-Health</td>
<td>Electronic Health</td>
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<tr>
<td>EN</td>
<td>Enrolled Nurse</td>
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<tr>
<td>FHI</td>
<td>Family Health International</td>
</tr>
<tr>
<td>HC</td>
<td>Health Centre</td>
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<tr>
<td>HF</td>
<td>Health Facility</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MoHSW</td>
<td>Ministry of Health and Social Welfare</td>
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<tr>
<td>NCI</td>
<td>National Cancer Institute</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<tr>
<td>NSGPR</td>
<td>National Strategy for Growth and Poverty Reduction</td>
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<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>PNC</td>
<td>Postnatal Care</td>
</tr>
<tr>
<td>R &amp; AWG</td>
<td>Research and Analysis Working Group</td>
</tr>
<tr>
<td>RCHA</td>
<td>Reproductive and Child’s Health Aider</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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</tr>
<tr>
<td>RN</td>
<td>Registered Nurse</td>
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<tr>
<td>TBA</td>
<td>Traditional Birth Attendant</td>
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<tr>
<td>TDHS</td>
<td>Tanzania Demographic and Health Survey</td>
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<tr>
<td>TFR</td>
<td>Total Fertility Rate</td>
</tr>
<tr>
<td>TGHI</td>
<td>Tanzania Global Health Initiative</td>
</tr>
<tr>
<td>TT</td>
<td>Tetanus Toxoid</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNICEF</td>
<td>United Nations International Children’s Fund</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<tr>
<td>UNDESA</td>
<td>United Nations Department of Economic and Social Affairs</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>URT</td>
<td>United Republic of Tanzania</td>
</tr>
<tr>
<td>VEO</td>
<td>Village Executive Officer</td>
</tr>
<tr>
<td>WEF</td>
<td>World Economic Forum</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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### Glossary

<table>
<thead>
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<th>Definition</th>
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<tr>
<td><strong>Antenatal Care</strong></td>
<td>The regular medical and nursing care recommended for women during pregnancy.</td>
</tr>
<tr>
<td><strong>Enrolled Nurse</strong></td>
<td>A nurse who cares for people who are sick, injured, convalescent or disabled under the direction of registered nurses and physicians.</td>
</tr>
<tr>
<td><strong>Health Facility</strong></td>
<td>A dispensary or health centre that provides maternal and child health services.</td>
</tr>
<tr>
<td><strong>Hypertensive Disorder</strong></td>
<td>Also known as eclampsia. It is an acute and life-threatening condition occurring during pregnancy caused by sudden, sharp rise in blood pressure, oedema and albuminuria.</td>
</tr>
<tr>
<td><strong>Maternal Death</strong></td>
<td>The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and size of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not accidental or incidental causes.</td>
</tr>
<tr>
<td><strong>Maternal Morbidity</strong></td>
<td>Refers to the serious disease, disability or physical damage such as fistula and uterine prolapse, caused by pregnancy related complications.</td>
</tr>
<tr>
<td><strong>Obstetric Haemorrhage</strong></td>
<td>Refers to heavy bleeding during pregnancy, labour, childbirth and postnatal period.</td>
</tr>
<tr>
<td><strong>Obstructed labour</strong></td>
<td>Refers to the failure of the foetus to descend through the birth canal because there is an impossible barrier (obstruction) preventing its descent despite strong uterine contractions.</td>
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**Parity**

The number of times that she has given birth to a fetus with a gestational age of 24 weeks or more, regardless of whether the child was born alive or was stillborn.

**Multiparous**

A woman who has given birth more than once.

**Postnatal Care**

The care provided to women and newborn(s) for the first few months following birth.

**Registered Nurse**

A fully trained nurse with an official certificate of competence.

**Sepsis**

Refers to infections and systematic manifestations of infection during childbirth or postnatal period.

**Skilled Attendant**

Is an accredited health professional—such as midwife, doctor or nurse—who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated pregnancies, childbirth and immediate postnatal period, and in identification, management and referral of complications in women and newborns.

**Skilled Maternal Care**

The care provided to a woman and her newborn during pregnancy, childbirth and immediately after birth by an accredited and competent health care provider who has at her/his disposal the necessary equipment and the support for functioning health system including transport and referral facilities for emergency obstetric care.

**Traditional Birth Attendant**

A person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or by working with other TBAs.
Acknowledgement

In a comprehensive study like this, the researcher depends upon the support and generosity of others whether directly or indirectly. This group of tireless contributors deserves credit for this great work. However, the list is too long for everyone to be mentioned but this does not indicate any dilution of gratitude.

First I glorify the Almighty God who is at heaven for taking me through this course of study, I am internally grateful to him.

I would however like to express my gratitude to my sponsors, the Commonwealth Scholarship Commission for all the supports given during my stay in the United Kingdom.

I am also very grateful to my supervisors Dr. Janet Harrison and Prof. Mark Hepworth for their guidance and advice in my thesis proposal and healthy comments and suggestions that led to the completion of a full PhD Thesis.

My sincere thanks to the management of School of Business and Economics especially the Centre for Information Management staff for their support and assistance during the study period.

I am also highly indebted to my family members especially my husband who has always believed in me and for his moral support when conducting this research and for making me feel quite settled and comfortable. Heartfelt thanks to my sons Benson and Ebenezer for their love and patience during the whole period of my studies.

Last but not least, my sincere thanks to all study participants who participated in my interviews and focus groups whom without their support and cooperation this work would not have been possible.
Dedication

To the memories of my dearest mother: Ezereda B. Njibili.

To My dear Husband: Baraka Nyaulingo who supported and encouraged me through the long journey of my PhD studies and for enduring the distance and separation.

To my beloved Sons:

- Benson Nyaulingo, for his love and bearing the separation
- Ebenezer Nyaulingo for his company and understanding.

To my family Mwangakala’s and Nyaulingo’s for their prayers and moral support.
Abstract

Objectives: The purpose of this study was to examine rural women’s access to maternal health information and its impact on levels of skilled healthcare utilization.

Method: A qualitative study involving twenty five (25) pregnant women, five (5) Skilled healthcare providers and five (5) Traditional Birth Attendants (TBAs) was conducted in Chamwino District in Dodoma Region, Tanzania for a period of six months. Due to time and resource limitation the researcher selected two (2) of the 32 wards in the district where the problem of maternal mortality and non-utilization of skilled healthcare was most prominent. The two selected wards were Msanga and Buigiri wards.

The researcher used The Health Belief Model and Theory of Planned Behaviour to develop interview questions and focus group guides as well as the interpretation of the findings. The researcher examined how variable factors e.g. maternal health literacy, individual perceptions, local knowledge and care provider-related factors affect pregnant women’s health behaviours and utilization of skilled maternal services. The Data was analysed thematically using the 6-stage guide to thematic data analysis with the help of NVivo Software.

Results: The inadequate conditions of the health facilities and the poor working conditions of the care providers affected the provision of quality of maternal services and health information to pregnant women in the study area. The limited access to skilled maternal health information from skilled healthcare providers and lack of alternative sources of reliable health information led pregnant women to seek health information from their Mothers-in-laws, TBAs and other women in the society. However, there was a shortcoming of information inaccuracy as their health advice was not based on previous expert advice but rather on the personal opinion and attitude towards skilled maternal services.
The limited access to maternal health information caused majority of pregnant women to underestimate the risks of pregnancy related complications and how they responded to pregnancy danger signs and other ill-health conditions that raised during pregnancy. The majority of pregnant women reported not to seek and kind of care when experienced a health problem. It was also found that during labour some would go to the TBA for childbirth and later go to the dispensary when the TBA failed while others would just go for TBAs opinion and confirmation that it was real labour then go to the health facility. This delayed women’s timely access to obstetric care which is essential for positive outcome when a pregnant woman experiences a pregnancy or childbirth complications.

**Conclusion:** The improvement of the quality of skilled healthcare services in rural areas is a prerequisite for achieving desired outcomes in maternal mortality reduction efforts in Tanzania. However, improvement of quality itself is not a panacea if pregnant women are not aware of the services, hence the healthcare providers should also focus in increasing provision of maternal health information to pregnant women. The findings show that the limited access to skilled maternal health information from healthcare providers and lack of alternative sources for reliable health information has constrained majority of these women from becoming maternal health literate hence affecting their levels of utilization of skilled maternal services. The healthcare providers and policy makers should focus on meeting the health information needs of general rural populations and enable them to become well-informed and knowledgeable to make better and well-informed maternal health decisions.
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CHAPTER ONE: INTRODUCTION

1.1. Background

In the year 2000 the UN summit established eight international development goals that aim to improve living standards and the socioeconomic condition of the population in the developing world. The goals were set by the United Nations in 1990 and adopted by the international community in 2000 (UN, 2000). Three of the eight goals are focusing on improving population’s health: reducing child mortality (4th); improving maternal health (5th); and combating HIV/AIDS, malaria, tuberculosis and other diseases. Having three of eight Millennium Development Goals (MDGs) focusing on health improvement shows that population health is one of the major concerns in global agenda for human development and poverty reduction (Dodd & Cassels, 2006).

Moreover, the socio-economic development of any country largely depends on the well-being of its people, since good health (physical and mental) increases labour productivity which leads to increased income. Good health also reduces income generating days lost due to illness and decreases income spent on medical treatments, thus the earned income can be used for other development and growth activities such as education, food and enhanced production (Khan et al, 1994; Hamoudi & Sachs, 1999; Bloom & Canning, 2000; Bloom, 2004).

This study focused on the 5th Millennium Development Goal which aims at improving maternal health and reduce maternal mortality by three quarters by 2015. Maternal death is defined as ‘the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and size of the pregnancy. It includes the death from any cause related to or aggravated by the pregnancy or its management but not accidental or incidental causes (Chou et al, 2012, p4).
It is estimated that about 800 women die every day due to labour and pregnancy related complications and more than a quarter million more suffer disabling conditions (UNICEF, 2009). About 99% of these deaths occur in developing countries with Sub-Saharan Africa contributing to more than half of these deaths (WHO, 2005b & 2012a). Most of the maternal deaths occur during and immediately after birth: 27.1% of deaths are caused by severe bleeding, 10.7% by infection (sepsis), 14% by eclampsia (a seizure disorder), 8% by obstructed labour and 7.9% by abortion (Say et al, 2014).

The causes of maternal mortality are classified into two types, the direct and indirect causes. Direct causes are those that occur only during pregnancy and the immediate post-delivery period. e.g. obstetric haemorrhage, sepsis, hypertensive disorder of pregnancy (eclampsia), obstructed labour and unsafe abortion (Urassa et al, 1995; AbouZahr, 1995; WHO/UNICEF/...2007). They contribute to approximately 73% of all maternal deaths in the world (Say et al, 2014; WHO, 2005b; Starrs, 1998). The direct causes are preventable given proper utilization and timely access to skilled obstetric care (WHO, 1986). However, in most developing countries, the low utilization of skilled maternal health services have remained to be the major contributing factors to the high maternal mortality rates caused by direct causes (WHO 2015; WHO, 2005b).

On the other hand, indirect causes are those resulting from previously existing disease or disease that has developed during pregnancy (aggravated by pregnancy) but not directly due to obstetric causes (Urassa et al, 1995; AbouZahr, 1995; WHO/UNICEF/...2007). They include anaemia, malaria, diabetes mellitus, tuberculosis, cardiac diseases, hepatitis and HIV/AIDS (WHO, 2005b). Indirect causes account for about 20% to 25% of all maternal deaths worldwide (WHO, 2005b;WHO/UNICEF/...2007). For instance, malaria during pregnancy exposes a pregnant woman to other risks and complications like anaemia which increases the risk of maternal death by haemorrhage as a result of low blood levels. Furthermore, if not treated, malaria and anaemia can lead to miscarriage and underweight babies (WHO, 2005b).
In most developing countries, the causes of maternal deaths whether direct or indirect are usually attributed to cultural and socio-economic factors which affect women’s living conditions, health status, fertility and healthcare utilization behaviours (Urassa et al, 1995; Rogo et al, 2006). Poverty, low education levels, cultural practices and women’s lack of decision making power significantly contributes to limited access and non-utilization of skilled maternal services which aggravates the effect of direct causes (WHO, 2012). However, maternal deaths are preventable provided that the pregnant women effectively utilizes skilled healthcare services during pregnancy, childbirth and postnatal (Campbell et al, 2006; Chou et al, 2012).

The set time frame has passed and yet Tanzania and most of other developing countries are still far from reaching the target of reducing maternal deaths by three quarters by 2015. Between 1990 and 2010, the global maternal mortality ratio (i.e. the number of maternal deaths per 100 000 live births) declined by only 3.1% per year. This is far from the annual decline of 5.5% required to achieve MDG5 (Chou et al, 2012). These figures are still very high thus emphasize more dedicated actions are needed to improve maternal health in developing countries particularly increasing pregnant women’s knowledge on maternal health which will eventually improve their utilization of skilled maternal health services.
1.2. **Problem Statement**

It is estimated that about 80% of maternal deaths that occur today are due to preventable causes which could be avoided if women had the timely access to and proper utilization of skilled maternal services (UN Millennium Project, 2005). However, the limited access and poor utilization of skilled maternal services by pregnant women have resulted to the persistent increase of maternal morbidity and mortality rates in most developing countries (Amin et al, 1989; Chou et al, 2012). The majority of women, particularly in non-urban areas, usually do not seek skilled health services until the complications are in late stages which most of the time results in the death of a mother or/and a child (Mpembeni et al, 2007).

The 2005 Demographic and Health Survey showed that 94% of Tanzanian pregnant women made at least one ANC visit and 62% had four or more ANC visits, but only 47% of births were attended by skilled medical staff. More than 53% of deliveries took place away from health facilities with 31% being assisted by relatives and 19% by Traditional Birth Attendants (TDHS, 2004/05). In the 2010 survey, estimates showed a significant decline in number of women who attended at least 4 ANC visits from 62% to only 43%. The overall health facility deliveries increased for 3% to 50% but in rural and non-urban areas there still very high number of unskilled deliveries with more than 48% being unskilled deliveries (TDHS, 2010). About 29% of rural deliveries were assisted by relatives, 15% by traditional birth attendants (TBAs) and 3% were self-delivery i.e. without any help. Generally the utilization levels of skilled maternal services are still very poor resulting to high prevalence of maternal morbidity and mortality in Tanzania. Therefore more research and concentrated efforts are still needed to increase the utilization levels of skilled health maternal services and reduce unnecessary delays in accessing obstetric care.
Thaddeus and Maine (1994) classified the delays in seeking and accessing obstetric care into three categories. First is the delay in seeking or recognizing the need for healthcare which can be due to ignorance, cost, cultural practices and women’s lack of decision making power which does not allow a woman to decide by herself on when and where to seek medical care. Second is the delay in reaching the health facility which can be caused by first delay or due to other factors like distance, poor road infrastructures and geographical barriers e.g. rivers and thick forests. The third type of delay is the delay in receiving care at the health facility which can be due to lack of commitment, health staff shortage and/or limited health equipment and supplies. This study focused on addressing and reducing first delay where the researcher investigated the underlying factors affecting women’s access to and utilization of skilled maternal services and propose possible solutions to reduce the effect of the identified factors.

The existing literature shows that cultural, economic and social-demographic factors play a very significant role in determining women’s access to and utilization of skilled maternal health services (Ray et al. 1984; Elo 1992; Swenson et al. 1993; Abdalla 1993; Govindasamy 1994; Khan et al. 1994; Ahmed and Mosley 1997; Regmi and Manandhar 1997; Beegle et al., 2001; Shaikh & Hatcher, 2004). The literature also shows that the utilization of skilled health services is significantly influenced by the accessibility and availability of the health facilities and services (Rao and Richard 1984; Sarita and Tuominen 1993; Rohde and Viswanathan 1995; Kumar et al. 1997).

However, other studies found that the effect of limited access to health services outweighs socio-economic factors in health services utilization behaviours among poor populations since when the access to health services is improved, the socio-economic factors becomes insignificant (Rosenzweig and Schultz 1982; Elo 1992; Sawhney 1992; Govindasamy and Ramesh 1997). Furthermore other studies argue that the provision of health services alone cannot influence individual’s decision to utilize the provided services since people may not be motivated to do so (Ray et al. 1984; Tipping & Segall, 1995; Ahmed et al., 2001; Bedri, 2002; MacKian, 2003; Shaikh & Hatcher, 2004). For instance, in Tanzania maternal health services are provided free of charge and there is an extensive network of health facilities throughout the country.
with more than 70% of the population living within 5km from health facilities. But, the utilization of skilled maternal health services is still very low particularly in rural areas where majority of women (60%) attend less than four (minimum recommended) ANC visits throughout the course of pregnancy (MOHSW, 2008c; TDHS, 2010, Bangser et al, 2011). Nevertheless, to eradicate maternal mortality persisting in Tanzania today it is vital to ensure that all pregnant women actively seek and use the skilled health services during pregnancy, childbirth and immediately after childbirth.

Hence, it was important to understand the underlying factors other than social and economic characteristics that influenced rural women’s health decisions and healthcare utilization behaviour. The researcher argued that, rural women’s low/non-utilization of skilled maternal services was not only due to social demographic or geographical barriers but also lack of adequate knowledge on maternal health. The study focused on examining how rural women learnt about maternal health and whether they received enough health education and health information about maternal health to understand the risks involved in delays in seeking and non-utilization of skilled services. That is whether the decisions not to utilize the skilled services was based on informed health decisions or was due to ignorance and low knowledge on maternal health and healthcare.
1.3. **Research Aim and Objectives**

1.3.1. **Research Aim**

The study aimed at exploring pregnant women’s access to maternal health information, their maternal health literacy levels and its impact on levels of skilled healthcare utilization.

1.3.2. **Research Objectives**

In order to achieve research aim the study focused on accomplishing the following research objectives:

i. To examine the quality of maternal health services offered to rural pregnant women.

ii. To examine pregnant women’s access to and sources of maternal health information.

iii. To examine pregnant women’s knowledge (perceptions) and usage of maternal care services both formal and informal services.

iv. To determine pregnant women’s health services and health information needs.

1.4. **Significance of the Study**

Population’s access to health information remain insignificant and not a priority of health promotion programmes in most developing countries including Tanzania. Health information is only offered when there is a serious disease outbreak or epidemic but after the disease is controlled the communities are usually left with no other alternatives to access the information about that disease or any other health concerns. Further, for marginalised rural populations where internet and TV are not options it is even more difficult to access reliable health information. This study set out to investigate rural pregnant women’s access to maternal health information and its’ impact on their healthcare seeking behaviour.
Several studies have been done on factors influencing pregnant women’s healthcare utilization behaviours (Mpembeni et al, 2007; Van Eijk, 2006; Ona et al, 2006; Mekonnen, 2003; Osubor, 2006. However, very little research has been done on maternal health information accessibility in developing countries particularly in rural areas. Very few studies have researched population’s access to health information (Anasi, 2012; Bosompra, 1989) and even fewer on accessibility of maternal health information among rural populations (Nikiema et al, 2009). No study has been done especially in the Tanzanian context to investigate the accessibility of maternal health information among rural women and how it impacts their maternal healthcare utilization behaviour.

Skilled healthcare utilization is key to maternal mortality reduction (Chou et al, 2012; Lincetto et al, 2006), therefore unless all pregnant women have adequate and proper knowledge about maternal health and pregnancy danger signs, they are very unlikely to seek the required care on time and have a skilled attendance at birth. Previous research projects have focused on the impact of social demographic factors on maternal care utilization behaviours and overlooked the impact of limited access to maternal health information, local sources and inadequate knowledge on maternal health to the healthcare utilization behaviours.

Furthermore, several initiatives has been done in Tanzania to improve pregnant women’s access to maternal and child health services. Initiatives include offering delivery packages, and increasing the number of health facilities that offer obstetric care in rural areas. Over 70% of the Tanzanian population is believed to live within 5km of the health facility proximity (MoHSW, 2008c). However, despite the increased number of health facilities and number of women who attend at least one antenatal care clinic (96%), the number of home births is still very high (49%) as well as the problem of late start of antenatal care clinic (62%) which result to fewer ANC visits during pregnancy.

The researcher argues that having a health facility nearby without adequate healthcare staff and quality maternal health services is not sufficient enough to increase skilled care utilization and reduce maternal mortality rates. Furthermore, pregnant women may be living near the health facility but if they do not have adequate knowledge and
understanding on the essence of skilled healthcare and antenatal care during pregnancy or skilled attendance at birth, they are very unlikely to utilize these services even when they are at the vicinity. Hence, there was a need for context specific study to be done that would go beyond social demographic factors to assess what the rural pregnant women know, how they learn about maternal health and how it affect their attitude and utilization of maternal services.

The researcher argues that, other than social demographic factors, the pregnant woman’s knowledge on maternal health is key for all the decisions she makes about pregnancy and how she reacts to pregnancy related complications and health issues. Unlike in developed countries or urban areas where people have easy access to several sources of maternal health information e.g. GPs, internet, TVs and printed materials, the access to maternal health information in developing countries like Tanzania is still very limited particularly in rural areas. Furthermore, it is assumed that pregnant women learn about maternal health at the antenatal care clinic despite the fact that the number of women attending ANC clinic in rural areas is very low and there is acute shortage of healthcare staff. Given the current state of limited access to health information due to acute healthcare staff shortage and poor resourced health facilities in rural Tanzania the study aimed at investigating how pregnant women living in these areas survive gestational period. How they got the information they needed and health advice to maintain healthy pregnancy and safe childbirth.. The study has shed light on the relationship between individual’s health information access and healthcare seeking behaviours.

Furthermore, the study fills the existing gap in the important body of knowledge on population’s access to health information. This study is particularly important as it was done in a rural population in a developing country where the majority are marginalized with limited access to media and health information in general. The study has also explored the strength and weakness, opportunities and challenges of the current sources of maternal health information in rural populations. The findings will help to inform the health planners in planning health promotion programs on skilled maternal utilization improvement and maternal mortality reduction strategies.
1.5. **Tanzania Country Overview**

The United republic of Tanzania is the largest country in East Africa having a population of about 46.9 million people, covering about 947,300 square kilometres area. Tanzania is formed by the union of Tanganyika mainland and Zanzibar Island. The country lies south of the equator and shares borders with eight countries; Kenya and Uganda to the North; Burundi, Rwanda, Democratic Republic of Congo, and Zambia to the West; Malawi and Mozambique to the South and an Indian Ocean on the East (TDHS, 2010). About half of the country’s population is under age 15 (47%) and the other 49% is between the age of 15 to 64, while the remaining 4% is of age 65 or older. With less than half of the population in the economically productive age range (15-64) a substantial economic burden is placed on this group to support younger majority and older members of the population (TDHS, 2010). There are about 120 ethnic groups on the mainland with Swahili being the first official national language. English is the second official language and a media of instruction in secondary schools and higher education institutions.

As a low-income country, the economy is driven by tourism, agriculture, mining, and the communication sector with the consistent economic growth of about 7% per annum over the past decade (TGHI, 2010). However, the economic growth has not been reflected in the life of the most Tanzanians during the past ten years. To date more than 57% of the population still lives under poverty line of 1 USD per day (WHO, 2009).

The average literacy rate in Tanzania is 77% (72% females and 82% Males) being higher in urban areas than rural areas. Moreover, the literacy level differs significantly among regions, for example the highest proportion of the population who have never been to school is found in Tabora region (42% females and 34% Males) and Dodoma region (40% females and 33% males). While regions with the lowest proportion of household members who have never attended school are Kilimanjaro region (10% females and 4% males) and Dar es salaam region (11% females and 4% males) (TDHS, 2010). This study will be based in Dodoma region, one of the regions with very low literacy levels.
The population’s access to media also varies significantly between urban and rural dwellers. In the 2010 Demographic and Health Survey in which respondents were asked how often they read a newspaper, listen to radio or watch a television in a week; the findings showed that urban residents were more likely to be exposed to all forms of media (23% females and 44% males) compared to the rural residents counterparts (3% females and 11% males). The most popular media in rural areas were radios where about 73% females and 86% males listened to the radio at least once a week (TDHS, 2010). These media access levels are very low therefore any information disseminated through the media is likely not to reach the rural dwellers who are the population majority (75%) leaving them out of the health promotion campaigns e.g. skilled maternal care utilization and intensive breastfeeding campaigns and health information access in general.

The current income, literacy and media access levels are still very low particularly amongst rural women; situation which may have impact on women’s utilization levels of skilled maternal services. The study aimed at investigating how pregnant women access maternal health information and its influence on the general skilled care utilization levels.

1.5.1. Tanzania Health System and Healthcare Delivery

Since its independence in 1961, the Tanzanian government have been trying to improve access to healthcare services to non-urban population which makes about 75% of the population. The country’s health care system is structured in way that a patient can access healthcare at a health care facility within a 5km distance and if necessary be referred from a particular point of care (Community health post) to the more advanced health facilities (Kwesigabo et al, 2012). However, in reality the majority of rural inhabitants (varies with populations) tend to first seek care from traditional healers and go for formal medical care only when necessary. The lower levels of health system usually provide only the primary care.

A health post is the lowest level (See figure 1.1) of health care system and serves a population of about 1000 people. It is run by the Village Health Worker who is usually employed by the village government. Village Health workers attend short training courses before starting working at the community health post where they
provide health education and care for minor illness to families in their home under supervision of staff at the next higher level of referral system, the dispensary (Kwesigabo et al, 2012; URT, 2007).

The dispensary is the next higher level after the health post; this is run by the clinical assistant with the aid of enrolled nurse though in some places it is run by a health worker or medical attendant. The dispensary provides maternal and child health care, treat simple pregnancy cases such as anaemia and normal deliveries. They provide primary outpatient care to a population of 6000 to 10,000 people. Some dispensaries offer laboratory and dental services and directly observed treatment (taking TB tablets in front of the health worker) for TB patients.

The next higher level after dispensary is the health centre which serves about 50,000 people. The health centres are often run by clinical officers supported by enrolled nurses. They provide preventive care, reproductive health services, maternal and child health services, minor surgery diagnostic services and inpatient services with up to 24 patients at a time though sometimes they are overcrowded with more than 24 patients at one time. This is the nearest health facility to the rural communities with relatively adequate health staff and equipment. The study intended to work with health staff at the health centres focusing on understanding from care provider’s perspective the factors affecting women’s utilization of skilled maternal services and how they could be facilitated to provide and meet the health information and health services needs of the pregnant women to improve the utilization levels. However, the DMO’s office recommended to work with the dispensaries since the problem of non-utilization is bigger there than in the health centres. Thus the researcher worked with the health staff from dispensaries instead.

The district hospital is the higher level after health centre also known as level-1 Hospital care which provides inpatient and outpatient services that are not available in health centres and dispensaries. It is run by medical doctors and in some cases is run by assistant medical officers supported by clinical officers and enrolled and registered nurses. They provide laboratory, surgical and diagnostic x-ray services and emergency obstetric care; they serve a population of up to 1.4 million people.
After district hospital the next higher level health facility is the regional hospital. Regions are usually formed by 4 to 8 districts, and currently there are about 18 regional hospitals throughout the country providing specialized health services and they serve a population of up to 3 million people. Regional hospitals are also responsible for developing and managing various programs for disease preventions and health promotions. They are often run by general surgeons, paediatricians, general medical physicians, midwives and general and specialized nurses.

Further, regions are grouped into zones and then have one zonal referral hospital which provides advanced care in a respective zone. These are also teaching hospitals providing complex health care requiring advanced technology and highly skilled personnel. Currently there are three (3) referral hospitals in which 1 is government run and the other two are run by faith based organizations in partnership with the government. There is also one national referral hospital which handles all complex cases that could not be handled in all other lower levels (URT, 2007; Kwegisegabo et al, 2012).
But, the referral system has not been very efficient and does not function as intended. The weak health system, inadequate staff, equipment and limited transport and communication facilities at lower level health facilities have caused unnecessary referrals to higher specialized hospitals (URT, 2007). The critical shortage of medical staff and equipment in the dispensaries and health centres undermines effective operations at lower levels leading to unnecessary referrals to higher level hospitals. Another limiting factor is the poor communication system between care providers at different levels which leads to under-utilization of existing staff skills and facilities. Effective and easy communication between care providers from high and those at low level health facilities would make better use of the few available medical personnel hence reducing the effect of acute medical staff shortage (URT, 2007). For example, the Aceh Besar Midwives project in Indonesia uses mobile phones to facilitate communication between health staff located in remote rural areas and experts in urban centres to facilitate women’s access to emergency obstetric care to reduce third type of delay and so far the project has shown positive results by increasing rural women’s access to quality care despite the health staff shortage (Tsawe et al, 2015; Chibet al, 2008).

Furthermore, facilitating the populations at the grassroots to access important health information increases the individual’s sense of responsibility over their health resulting to more informed health decisions. The literature shows that well informed individuals are likely to adopt healthy behaviours and stay healthy for longer than the less informed counterparts (Wathen and Harris, 2007). When majority of the population adopt healthy behaviours, it is likely that the number of ill individuals will be reduced as well as a disease burden in the society and healthcare system. Health behaviours adoption will thus, reduce the effect of the persistent problem of acute health staff shortage currently existing in most developing countries.
1.5.2. Tanzania Maternal Health Care Delivery and Maternal Mortality

For almost thirty years since its independence in 1961, the maternal mortality rates in Tanzania have been declining from 453 deaths per 100,000 live births in 1961 to 190 deaths per 100,000 live births in 1990 before the trend changed in 1991 and starting going upward reaching 578 deaths per 100,000 live births in 2005 (TDHS, 2005). Several factors have been associated with the increased rate of maternal mortality during that period. Among other things, it is the economic downturn in 1990s which significantly weakened the country’s health system causing the government to suspend the employment of health workers which in-turn affected the staff-patient ratio. The effect was immense particularly for the cadres that provided much of maternal care at the community level (Shija et al, 2012). In addition to that, the government also introduced the cost sharing system to cope with the crisis, the system which is still running to date causing the majority poor to be left out of the formal healthcare system. The cost sharing system requires patients to pay a certain amount of money (user fees) when going to health facilities for services though some groups (e.g. children under five, pregnant women and older people over 60) are exempted. But due to prevailing poverty majority of the population still can’t afford to pay user fees hence resorting to traditional help.

The 2010 Demographic health survey shown that about 13,000 women dies each year (1 woman every hour) in Tanzania due to labour and pregnancy-related complications and more than a quarter million more suffer disabling conditions (TDHS, 2010; WHO, 2005b). Currently, Tanzania is lagging far behind its National Strategy for Growth and Poverty Reduction (NSGRP) goal of 265 per 100,000 live births and MDG 5 target of 133 by 2015 (MoHSW, 2008c; MOHSW, 2008a). The country ranks 21st among countries with highest maternal mortality rate in Africa (Chou et al, 2012).
However, efforts have been made to reduce maternal mortality in the country and a number of interventions have been implemented which includes; providing free of charge maternal services, increasing accessibility to emergency obstetric services, strengthening the health system (training more health staff and increasing supplies and equipment), providing comprehensive ANC services and strengthening safe blood banks for obstetric services (Shija et al, 2012). The government also provide free reproductive health and family planning services as well as empowering women in decision making and encouraging male involvement in reproductive health (Wagstaff & Claeson, 2004; Rogo et al, 2006; Shija et al, 2012). Generally, there has been a progress in improving maternal health outcomes as the maternal mortality rate has dropped to 454 per 100,000 live deaths by 2010 (TDHS, 2010). It is a notable improvement despite the fact that the figures are still very high and therefore more dedicated actions are needed to address underlying problems causing high prevalence of maternal deaths among Tanzanian women. To contribute to the ongoing efforts on maternal death reductions, this study aimed at understanding factors underlying the current low utilization levels of skilled maternal services by pregnant women and how women could be facilitated to fully utilize maternal services improve pregnant women’s health outcomes.

1.5.3. Quality Standards For Maternal Healthcare

WHO defines quality of care as “the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centered” (WHO, 2015). The quality of care for women and newborns is therefore the degree to which maternal and newborn health services (for individuals and populations) increase the likelihood of timely, appropriate care for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and take into account the preferences and aspirations of individual women and their families.
Quality standards in healthcare are important because they help to improve population’s health by: measuring and addressing disparities in healthcare accessibility and outcomes; help healthcare users to make informed decisions and choices; identify what works and what doesn’t to facilitate improvement and prevent overuse, underuse and misuse of healthcare services (Morris and Bailey, 2014).

However, the quality of care is multi-dimensional concept, hence there is a need to identify key domains that should be targeted to assess, improve and monitor care provision in health facilities. WHO used various models and the health system approach to prepare a quality of care framework (Figure 1.2) that is used to guide managers, policy makers and healthcare providers in improving the quality of health services for mothers and newborns (Tuncalp et al, 2015). The quality framework has eight domains (Table 1.1) and focuses on health facilities though it also accounts for the role of services users and communities in identifying healthcare needs & preferences as well as managing their own health (WHO, 2015).
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<th>S/N</th>
<th>MEASURES</th>
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| 1   | Evidence-based practices for routine care and management of complications | ➢ Women are assessed routinely on admission and during labour and childbirth and are given timely, appropriate care.  
➢ Women with pre-eclampsia or eclampsia, postpartum haemorrhage and obstructed labour promptly receive appropriate interventions, according to WHO guidelines. |
| 2   | Actionable information systems | ➢ Every woman and newborn has a complete, accurate, standardized medical record during labour, childbirth and the early postnatal period.  
➢ The health facility has a mechanism for data collection, analysis and feedback as part of its activities for monitoring and improving performance around the time of childbirth. |
| 3   | Functional referral systems | ➢ Every woman and newborn is appropriately assessed on admission, during labour and in the early postnatal period to determine whether referral is required, and the decision to refer is made without delay.  
➢ Every woman and newborn who requires referral, the referral follows a pre-established plan that can be implemented without delay at any time.  
➢ Every woman and newborn referred within or between health facilities, there is appropriate information exchange and feedback to relevant health care staff. |
| 4   | Effective communication | ➢ All women and their families receive information about the care and have effective interactions with staff.  
➢ All women and their families experience coordinated care, with clear, accurate information exchange between relevant health and social care professionals |
| 5   | Respect and preservation of dignity | ➢ Women and newborns have privacy around the time of labour and childbirth, and their confidentiality is respected. |
1. No woman or newborn is subjected to mistreatment, such as physical, sexual or verbal abuse, discrimination, neglect, detainment, extortion or denial of services.

2. All women can make informed choices about the services they receive, and the reasons for interventions or outcomes are clearly explained.

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<th>Emotional support</th>
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<td>6</td>
<td>Every woman is offered the option to experience labour and childbirth with the companion of her choice.</td>
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<td>Every woman receives support to strengthen her capability during childbirth.</td>
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<th>Competent, motivated human resources</th>
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<td>7</td>
<td>Every woman and child has access at all times to at least one skilled birth attendant and to support staff for routine care and management of complications.</td>
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<td></td>
<td>The skilled birth attendants and support staff have appropriate competence and skills mix to meet the requirements of labour, childbirth and the early postnatal period.</td>
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<td></td>
<td>Every health facility has managerial and clinical leadership that is collectively responsible for developing and implementing appropriate policies and fosters an environment that supports facility staff in continuous quality improvement.</td>
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<th>Essential physical resources available</th>
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<tr>
<td>8</td>
<td>Water, energy, sanitation, hand hygiene and waste disposal facilities are functioning, reliable, safe and sufficient to meet the needs of staff, women and their families.</td>
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<td></td>
<td>Areas for labour, childbirth and postnatal care are designed, organized and maintained so that every woman and newborn can be cared for according to their needs in private, to facilitate the continuity of care.</td>
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<td></td>
<td>Adequate stocks of medicines, supplies and equipment are available for routine care and management of complications.</td>
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The eight domains of the quality of care framework increase the likelihood that pregnant women and the community in general will receive the desired health outcomes (WHO, 2015). The framework can also be used to assess the characteristics of quality of care in various health sectors of the health system from both services users and service providers. The researcher used these domains to assess the quality of maternal health services provided in the study population and achieve the study objective one ‘To examine the quality of maternal health services offered to rural pregnant women’.

1.6. Thesis Structure

Chapter One: Presents the general introduction to the research study that has been undertaken. First, the researcher provides the background of the research and description of the research problem. Then the researcher outlines the study aim, and objectives as well as study significance. Finally, the researcher presents the country overview on Tanzania’s healthcare system, maternal healthcare delivery and maternal mortality levels.

Chapter Two: As the research used both theoretical and empirical literature, the chapter is divided into two sections. First section reviews the theoretical background on people’s health behaviours focusing on Health Belief Model (HBM) and The Theory of Planned Behaviour (TPB). The second section reviews: maternal health and maternal mortality in Tanzania and developing countries; Health information access and seeking behaviour and; Factors affecting pregnant women’s healthcare utilization behaviour. At the end of the chapter the researcher presents the identified gap in the literature and the conceptual framework used to guide the development of interview questions and focus groups topics.

Chapter Three: The chapter outlines how the research was carried out by providing an overview of the research strategy used in the study to answer research questions and fulfil the research aims and objectives. The chapter describes the research philosophy, design and methods that were adopted for data collection and analysis in order to answer the research questions. Study populationa and participant selection procedure are also
discussed in this chapter. The chapter ends by outlining the ethical issues and considerations that were observed in conducting research with pregnant women.

**Chapter four:** In this chapter, the researcher presents the data collection process and analysis procedure. It presents the data collection tools that were used to collect research data, the preliminary data analysis and how data was analysed using thematic analysis of qualitative interviews and focus group discussions.

**Chapter Five:** Presents the findings from the interviews and focus groups on the how access to maternal health information influences pregnant women’s healthcare seeking behaviour. The chapter starts with descriptive analysis for demographical data before presenting the qualitative analysis of data from interviews and focus groups. Findings on the quality of maternal health services both formal/skill and informal/TBA’s are also presented in this chapter, the rest of the findings are presented in chapter six.

**Chapter Six:** Present findings focusing on accessibility of maternal health information among pregnant women in rural Tanzania and its impact on women’s healthcare seeking behaviour. The chapter starts by presenting the key sources of maternal health information pregnant women in rural Tanzania use to access health information and the availability of skilled health information. Pregnant women’s knowledge on maternal halth and its impact on their healthcare seeking behaviour is also presented in this chapter. The chapter ends with the findings on pregnant women’s health information needs and preferences.

**Chapter Seven:** Provides a discussion of the findings in relation to the literature on pregnant women’s utilization of skilled services and access to maternal health information.

**Chapter Eight:** This is the last chapter that which draw the study’s ultimate contribution and recommendation for future research and policy development for improved healthcare utilization and successful maternal mortality reduction in Tanzania.
CHAPTER TWO: LITERATURE REVIEW

2.1. Theoretical Framework

2.1.1. Introduction
Theory is a set of interrelated concepts, definitions and propositions that explains or predicts events or situations by specifying relations among variables (Glanz et al, 1990). The researcher’s choice of models and/or theories suitable for the study is determined by the research problem, goals, objectives and the unit of investigation (van Ryn and Heany, 1992; Sussman and Sussman, 2001). Theories were used in research to help and guide the researcher to identify what needed to be known and how it can be known (Glanz et al, 2008). They provided the researcher with an insight on why the problem existed and factors that might have caused or associated with the problem. However, different theories are suitable for different research problems and different health behaviours (Redding et al, 2000). Hence, the choice of appropriate theory that fits study aims and objectives was key for successful research.

Health behaviour is defined by Kasl and Cobb as ‘any activity undertaken by a person believing him or herself to be healthy for the purpose of preventing disease or detecting it at an asymptomatic stage’ (Kasl and Cobb, 1966; p246). It is also defined by Conner and Norman (1996a, p2) as ‘any activity undertaken by a person for the purpose of preventing or detecting disease or for improving health and wellbeing’. The activities include medical check-ups, appointment adherence, treatment compliance and self-directed health behaviours like having healthy diet, protected sex and physical exercises (Conner and Norman, 2005).
However, changing human behaviour is a process (sometimes very long) and not just an event, hence it is vital to understand what elements influence that change, how it occurs and what are the necessary elements to trigger it. Behaviour theories explain why individuals behave the way they do, what influences their behaviour and how the behaviour could be modified. The study focused on investigating how maternal health information access influenced pregnant women’s healthcare utilization behaviours. Thus the use of health behaviour theories and models helped the researcher to understand the possible factors underlying pregnant women’s current healthcare utilization behaviour and how it could be modified. Nevertheless, to date there are more than 60 health behaviour models and theories used in health education and health promotion programs to explain and predict people’s health behaviours. To identify and choose the most appropriate theory/model fitting the study the researcher reviewed the literature on studies investigating similar health behaviour problems.

A review by Glanz et al (1990) involving 116 articles on health behaviours found that out of the 51 used health models, the three most frequently cited were Social Cognitive Theory (SCT), Theory of Reasoned Action (TRA) and Health Belief Model (HBM). In a second review which involved 526 articles, 66 theories/models were used and 21 of them were identified as cited at least 8 times. Eight theories accounted for two-third of the 21 most frequently used theories which are HBM, SCT, TRA/TPB, Community Organization, Self-efficacy, Transtheoretical Model (TTM)/Stages of Change, Social Marketing and Social Support/Social Networks (Glanz et al, 1996).

In another review in 2002 which included studies published between 1999 and 2000 found that out ten most frequently used health behaviour models, two theories were identified as most dominant, the SCT and TTM/Stages of Change theory (Glanz et al, 2002). The other eight models were HBM, TRA/TPB, Social Support and Social Networks, Patient-provider Communication, Stress and Coping, Community Organization, Ecological/Social ecology and Diffusion of Innovations theory. The most recent review by Painter et al (2008) found that the most dominant and useful theories in predicting and explaining health behaviour were TTM, SCT and HBM.
Generally, over the past decade the four theories TTM, HBM, SCT and TPB have been dominating health behaviours. The table below shows the summary of the most frequently used theories and models identified in the above reviews.

<table>
<thead>
<tr>
<th>Theory/Model</th>
<th>Health Belief Model</th>
<th>Social Cognitive Theory</th>
<th>TRA/TPB</th>
<th>TTM/Stages of Change</th>
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<td>Articles Published Between</td>
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However, recent studies show that TTM is no longer effective in behaviour change. The studies by (Adams & White, 2005; Bridle et al, 2005; West, 2005) show that TTM was irrelevant in behaviour modification interventions. Hence, the TTM was not used in this study.

Nonetheless, the health behaviour literature shows that due to its complex structure the SCT model is difficult to implement using all of its elements, making it difficult to ascertain its ability to influence health behaviours. Only two of its constructs have been frequently used in health behaviour studies, the individual’s self-efficacy and outcome expectation outcomes (Conner and Norman, 2005). Thus the SCT was also not used in this study. Instead, the study used some constructs from Health Belief Model, and Theory of Planned Behaviour to predict and explain pregnant women’s healthcare utilization behaviour in relation to their access to maternal health information. The description of these theories is provided in the following sub-sections.
2.1.2. Health Belief Model

The Health Belief Model was developed in 1950s to explain why people do not engage in health-related programs to prevent and detect diseases even when those services were free and within their reach (Hochbaum, 1958; Rosenstock, 1974). It became popular after the poor outcomes of U.S Public health programs in 1950s, when the very few eligible adults turned up to participate in tuberculosis screening program which was provided free of charge in mobile X-ray units conveniently located in their neighborhood (Janz et al, 2002). The model was later extended to include people’s response to disease symptoms (Kirscht et al, 1978) and their behaviour in response to the diagnosed illness particularly compliance to the prescribed medical treatments (Becker, 1974; Janz & Becker, 1984; Harrison et al, 1992).

HBM describes individual’s health behaviour in two dependent aspects; the individual’s perception on the threat of ill health, and the assessment of the required actions to counteract the threat (Conner and Norman, 2005). Whether or not an individual would respond to the recommended health action depends on his evaluation of the available alternatives, the benefits and efficacy of the health behaviour and the related cost and abilities to perform the recommended health behaviour (Conner and Norman, 2005).

Health belief model contains five key constructs. First, is the ‘perceived susceptibility’ which refers to individual’s subjective assessment on the likelihood of developing a health problem. That is a person is likely to seek medical care or adopt healthy behaviours (prevention, screen or treat ill-health) only when she believes that she is susceptible to the particular negative health outcome (Rosenstock, 1966). Normally individuals are less likely to do anything to prevent a health problem which is unlikely to afflict them (Carpenter, 2010).

Second, it is the individual’s ‘perception on the seriousness’ of consequences of the health problem which determines the level of motivation to act in order to prevent the negative health outcome (Rosenstock, 1966). If the outcomes of the health problem do not have significant negative impact on an individual, she is less likely to act to avoid
it. The negative impacts may include pain, death, physical and/or mental impairment (Carpenter, 2010).

The other two variables focus on the individual’s perception on the available solutions that will reduce the susceptibility or severity of condition at maximum convenience (Janz et al, 2002). Perceived Benefits’ refers to pregnant women’s perception on the benefits of engaging on new health behaviour. For an individual to adopt new health behaviour she must perceive that the recommended health behaviour is potentially beneficial and will definitely prevent the negative health outcome (Carpenter, 2010).

The fourth variable is individual’s ‘perceived barriers’. Pregnant women are likely to adopt new health behaviour if they believed being capable of overcoming the barriers associated with the adoption of new behaviour. If an individual believes that there are very strong barriers (e.g. cost, time or social norms) that might prevent them adopting new behaviour, they are unlikely to adopt the behaviour (Rosenstock, 1966).

The fifth variable is ‘cues to action’; these are additional elements which motivate an individual to adopt new health behaviours (Rosenstock, 1966). Cues to action helps to trigger individual’s decision making process and readiness to act towards the health behaviour. Cues to action include external cues like mass media campaigns, reminder postcard from physician or advice from others and internal cues like negative body changes or pains (Janz and Becker, 1984).
Several meta-analyses studies have been done to analyse the ability of HBM to predict various health behaviours (Janz and becker, 1984; Harrison et al, 1992; Zimmerman and Vernberg, 1994; Carpenter, 2010). A review by Janz and Becker (1984) found HBM variables to be the strong predictors of health behaviours and Perceived barriers were found to be the strongest predictor across all behaviours while perceived susceptibility was a stronger predictor in preventive behaviours than in sick-role behaviours. That is a pregnant woman with pregnancy complication or who previously had a complication is less likely to be affected by perceived susceptibility since she has already been susceptible to the particular health problem unlike in preventive behaviour where an individual is yet to experience the health problem. Perceived severity was the stronger predictor in sick-role behaviours and moderate predictor in preventive and clinic utilization (Janz and becker, 1984).
Overall perceived susceptibility, benefits and barriers were found to be strong predictor for all behaviours while perceived severity was not (Champion and Skinner, 2008; Carpenter, 2010). However, the review has been criticized for focusing on statistical significance to measure variable relationships rather than mean effect sizes (Harisson et al, 1992; Carpenter, 2010). Mean effect size provides more precise estimates of the strength of relationships between variables than statistical significance as it is not affected by sample size variance (Carpenter, 2010). Also the significance ratios only reveal how often HBM components were significantly associated with behaviour, not how large the effects of HBM measures were on outcomes e.g. actual behaviour (Conner and Norman, 2005, 35).

Another meta-analysis study was done by Harrison et al, (1992) which addressed some of the weaknesses of Janz and Becker review (1984). The study found that the ability of HBM components to predict behaviour varied between retrospective and prospective studies. The mean effect size was larger in retrospective studies than prospective studies (Carpenter, 2010), meaning that generally HBM is not sufficient in predicting future behaviours than it is in current behaviours. However for individual components, perceived benefits and barriers had significantly larger effect size in prospective studies than in retrospective ones, while perceived severity had larger effect size in retrospective studies than in prospective studies (Conner and Norman, 2005). Generally, the Harrison et al (1992) review show that the HBM four components (susceptibility, severity, benefits and barriers) are still very significant predictors of health behaviours only that their effects are small (Conner and Norman, 2005).

The most recent meta-analysis review by Carpenter (2010) found the HBM components to be the significant predictors of health behaviours, though their effectiveness in predicting behaviour varies between behaviours. Perceived benefits and perceived barriers were found to be strong predictors in all behaviours, while perceived severity was the weakest predictor. Susceptibility was found to be an important predictor in preventive behaviours than in treatment or sick-role behaviours. The plausible explanation could be that, people diagnosed with a disease may not have diverse perceptions on susceptibility because they are already susceptible (Carpenter, 2010). Moreover, the effect of severity is very much
influenced by type of health behaviour, as it is expected that very few people will perceive cancer as less than severe (Harisson et al, 1992). Generally the review by Carpenter show that out of the four measured components of HBM, only perceived benefits and barriers were the strongest predictors of health behaviours.

Emphasizing the effectiveness of HBM on longitudinal studies over cross-sectional studies, Janz and Becker (1984) argue that unless the variables are measured before the intervention to allow individual decide whether or not to adopt new behaviour, the results will show negative relationship between variables and behaviour (Carpenter, 2010). Once a person has adopted a new behaviour, the perceptions about behaviour are likely to change consistently with the behaviour (Carpenter, 2010) as individuals are more likely to perceive themselves to be less susceptible to the negative health outcomes. Hence to effectively measure the predicting power of HBM on health behaviours in cross-sectional studies, the variables should also be measured before the behaviour adoption.

However, most of the HBM studies rarely measure and research cues to action as predictor of health behaviours, it is the least developed element of the model (Rosenstock, 1974; Janz and Becker, 1984; Zimmerman and Vernberg, 1994, Carpenter, 2010). However, despite the limited literature on the predicting power of cues to action on health behaviours the researcher believes it to be important element for behaviour change interventions. The few existing literature show the significant positive impact of cues to action on predicting and influencing health behaviours (e.g. Weinberger et al, 1981; Larson & Killien, 1982; Grady et al, 1983; Stacy and Lloyd, 1990 and Norman and Conner, 1993). For instance, a study by Grady et al (1983) found that, there is strong association between family member’s participation in breast self- examination and existence of cancer patient in the family or history of cancer. Other studies found strong relationship between behaviour change e.g. smoking cessation, vaccination adherence and cues like media campaigns, and physician reminders and advice (Ogionwo, 1973; Weinberger et al, 1981; Larson et al, 1982). Thus if it is well constructed cues to action is a significant predictor of health behaviours and plays a significant role in influencing individuals’ health behaviours.
The model has its criticisms in which the possible interactions and relationships between variables has not been explicitly explained assuming that variables cannot be moderated by each other (Stroebe & de Wit, 1996 cited by Munro et al, 2007). For instance, if the individual have higher severity perceptions but very low susceptibility perceptions the likeliness of him/her to adopt new behaviour is very low compared to the one with higher perceptions on both severity and susceptibility. The HBM model has also been criticized for assuming that the decision to whether or not to engage in health behaviour lies entirely to an individual. It overlooks the impact of social context in individuals’ behaviours which significantly affects the way an individual process and act on health information (Sheeran & Abraham, 1996). HBM failed to explain the role of cultural beliefs and social relations in individual’s decisions and choices. The model is built on assumption that once the individual becomes aware of her susceptibility to the serious health problem and perceives benefits to be greater than costs then she is likely to adopt healthy behaviours (Norman & Bennett, 1996). However, in reality when an individual decide to seek/utilize medical care or any help related to her health, she first weigh the potential risk and benefit of such decision in relation to his immediate environment and social relations (MacKian, 2003). Therefore to compliment the weakness of HBM model the researcher used HBM and TPB. The TPB takes into consideration the effect of factors like cultural beliefs and social relations on individual’s health behaviours. Using the constructs from the three modes helped to complement the weaknesses of each model.
2.1.3. The Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) developed by Ajzen (1991), is an extension of the Theory of Reasoned Action (TRA) which was developed by Fishbein and Ajzen (1975). TRA core assumption was that, individuals are rational beings who use the available information to make careful considerations of the repercussions on engaging or not engaging in recommended behaviour (Ajzen and Fishbein, 1980). The theory proposes that individual’s behaviour is entirely dependent on the individuals’ intention to perform the behaviour. The behavioural intention itself is determined by the individual’s attitude toward the behaviour and subjective norms (Ajzen and Fishbein, 1980).

Individuals attitudes towards health behaviour, refers to the individuals’ subjective perceptions of how positive or negative they will feel when performing target behaviour. The Subjective norms refers to individuals’ perceptions on whether or not the significant others think they should engage in a behaviour (Fishbein and Ajzen, 1975). Significant others are those people whose opinion about individual’s behaviour matters to particular individual (Conner and Norman, 2005).

TPB extends TRA by adding another factor the Perceived Behaviour Control (PBC) (see figure 2.2) as the important determinant of health behaviours explaining that individuals do not always have complete control over their health behaviours (Ajzen and Madden, 1986; Ajzen, 1991; Taylor and Todd, 1995a). Individuals tend to engage in behaviours they feel they have control over and not those that they have little or no control at all (Ajzen, 1988).

Similar with TRA, in TPB the individuals’ behaviour is determined by the individual’s intention to perform the behaviour; however, intention to perform behaviour is determined not only by the attitudes and subjective norms, but also with individual’s perceived behavioural control (Mathieson, 1991). Perceived behavioural control refers to individual’s perception on the degree to which she believes to have control over personal or external factors that may facilitate or constrain the engagement in the target behaviour (Conner and Norman, 2005). It represents individual’s belief on availability and accessibility of necessary resources to perform behaviour (Armitage et al, 2002). People tend to engage in behaviours which they feel they have control
over, the one they can achieve and not otherwise (Bandura, 1986). This explains why intentions do not always lead to actual behaviour (Conner and Norman, 2005). A woman may have intentions to engage in new health behaviour but due to other factors (e.g. cost, stigma or social status) which she perceive to be beyond her control, she decide not to engage. For instance, a pregnant woman may wish to appropriately adhere to ANC clinics but due to her low position in the society and lack of support from other community members she may find it difficult after accomplishing her household chores to go to a health facility for ANC. Thus to influence the adoption of actual behaviour (ANC attendance) by this woman, other members of the community especially those significant to the woman need to be involved and fully support the expecting mother to seek and utilize skilled maternal health services.

However, the power of attitudes, subjective norms and perceived behaviour control variables in predicting behavioural intention varies with behaviours, context and population under study (Ajzen, 1991). Meta-analysis done by Hausenblas et al (1997) found TPB variables to be the strong predictors of sports and allied behaviours. The study also found large effect sizes for the associations between; intention and exercise behaviour, attitude and exercise behaviour, attitude and intention, PBC and intention

![Figure 2.2: Theory of Planned Behaviour (Source: Ajzen, 1991)](image-url)
and PBC and exercise behaviour. Subjective norms were found to have moderate
effect on intention and no effect on actual behaviour (Hausenblas et al, 1997).

Sheeran and Taylor (1999) meta-analysis found that while HBM variables were weak
predictors of condom use behaviour, TPB had relatively strong predictive power.
Attitudes and subjective norms were found to be the stronger predictors of behavioral
intention than PBC. A meta-analysis by Albarracin et al (2001) also found similar
results confirming the predictive power of attitudes and subjective norms on
behaviour intention and that of behavioural intention on actual condom use. PBC was
found to be relatively strong predictor of behavioral intention but weak predictor of
actual condom use behaviour.

Another meta-analysis study done by McEachan et al (2005) on drug use behaviours
(alcohol, smoking and illegal drugs use), found that PBC was the strongest predictor
of behaviour followed by attitudes, while subjective norms was the weakest predictor
(Conner and Norman, 2005). In sexual behaviour studies, he found attitudes to be the
strongest predictor, followed by subjective norms, while PBC was the weakest
predictor (McEachan et al, 2005). However, in Albarracin et al (2001) meta-analysis
they found attitudes and PBC to be stronger predictors of behaviour than subjective
norms.

In another a meta-analysis on people’s engagement in physical activities behaviours
McEachan et al (2005) found PBC to be the strongest predictor, followed by attitudes,
while subjective norms was the weakest predictor of behavioural intention. A review
by Hagger et al (2002) also found the same results.

In healthy eating behaviours, attitudes and subjective norms were found to be the
stronger predictors of behavioural intention while PBC had a weak effect on
behavioural intention. However, in predicting actual behaviour, behavioral intention
was the strongest predictor while PBC was the weakest (McEachan et al, 2005).
Generally, PBC had a weak effect in predicting health behaviours.
Furthermore, in screening behaviours which included breast self-examination and cervical screening, attitudes was found to be the strongest predictor followed by PBC, while subjective norms were the weakest predictor of behavioural intention. While in predicting actual behaviour, behavioural intention was the strongest predictor and PBC the weaker predictor (McEachan et al, 2005). Overall, attitude towards behaviour and perceived behavioural control was frequently found to be the strongest predictor of behavioural intention and actual behaviour adoption in almost all healthy behaviours. In determining behavioural intention attitudes was the stronger predictor than perceived behavioural control, while in predicting behaviour the behavioural intention was the stronger predictor than perceived behavioural control (Conner and Norman, 2005).

Generally TPB is very useful in predicting health behaviours and its variables have significant behaviour prediction power across a wide range of contexts (Armitage and Christian, 2003; McEachan et al, 2005). The systematic and meta-analytic evidence show that in predicting behaviour change, the TPB has more predictive power than HBM (Taylor, 2007). The evidence also shows that the additional component of TPB increases its behaviour predictive power and percentage of variance than TRA. When using TPB to predict behaviour it account for 20% to 30% of the observed variance in health behaviours (Sutton, 1998; Hagger et al, 2002) making it potential for this study. The researcher used TPB to understand and predict pregnant women’s maternal care utilization behaviour. It is plausible that the health information pregnant women had about maternal health (regardless of accuracy) influenced their perceptions and attitudes towards skilled healthcare. Thus, since the pregnant women could obtain health information from both healthcare providers and community member the ‘Social Norms’ construct from TPB was used to identify and understand how cultural and environmental factors influenced pregnant women’s perceptions and utilization of skilled healthcare.
However, these models do not capture all aspects of possible factors that could influence health seeking behaviours as people’s real life behaviours is also influenced by other factors some of which are contextual and are changing from time to time. Thus to capture all important factors underlying rural women’s healthcare seeking behaviour, the researcher also reviewed the empirical literature to identify other factors that were found in other studies which significantly affects women’s health seeking behaviour in their settings.
2.2. Empirical Literature

2.2.1. Maternal Mortality in Developing Countries

The year 2010 estimates show that about 800 women die every day in the world due to pregnancy and childbirth-related causes. On average in every one minute, at least one woman dies from complications related to pregnancy and childbirth with 20 other left with serious disabilities such as infertility, severe anaemia, fistula and incontinence (UN, 2008; WHO, 2005b& 2010b; UNICEF, 2003 & 2009; Waldijk, 1994). Furthermore, 99% of these deaths occur in developing countries with majority being from Sub-Saharan Africa and Southern Asia (Chou et al, 2012).

Sub-Saharan Africa and Southern Asia accounts for about 85% of the maternal deaths in developing world while Sub-Saharan Africa alone account for 56% of the deaths (Chou et al, 2012). India and Nigeria had the highest maternal mortality rates accounting for 19% and 14% of the global maternal deaths respectively. Other countries with highest maternal mortality rates includes The Democratic Republic of Congo (5%), Pakistan (4%), Sudan (3.5%), Indonesia (3%), Ethiopia (3%), Tanzania (2.9%) and Bangladesh (2.5%) (Chou et al, 2012).

The high fertility rate among women at reproductive age significantly contributes to the high maternal mortality rates in Sub-Saharan Africa. Fertility rate refers to the number of births per woman, usually described in terms of the woman’s age during the first pregnancy, number of pregnancies and the interval between them (Zimicki, 1989). Thus in areas where obstetric services are weak and poor, high fertility rate means higher risk of maternal deaths due to childbirth and pregnancy-related complications. The research shows that though most of the deaths occur in Asia but the risk of dying is highest in Africa due to high fertility rate among African women (WHO, 2005b). A woman in Sub-Saharan Africa have 1 in 6 chance of dying during childbirth compared to 1 in 8700 chances of dying in some countries in North America and Europe (WHO, UNICEF and UNFPA, 2001). Furthermore, the pregnancy in multi-paras (a woman with many children) woman poses high threat to the mother’s life as it increases the chance of preeclampsia, haemorrhage, anaemia, cord prolapsed, uterine rupture and mal-presentation (WHO, 1992a). Also pregnancy
at young or late age increases the risk of haemorrhage from rupture and obstructed labour thus putting a woman in higher risk of maternal mortality

HIV/AIDS have also been one of the leading indirect causes of maternal deaths particularly in countries with high HIV/AIDS prevalence (Chou et al, 2012). The HIV infected women have higher risk of dying due to pregnancy and childbirth-related complications than the uninfected counterparts (Terceira et al, 2003). In 2010 Sub-Saharan had the largest numbers of maternal deaths attributed to HIV. About 91% of the maternal deaths attributed to HIV worldwide were from Sub-Saharan followed by Southern Asia which contributed 5% of the deaths.

Healthcare services and solutions to prevent maternal deaths from these causes do exist making maternal mortality preventable. Only if all pregnant women timely seek and access treatment for the arising pregnancy complications then all preventable maternal deaths will be eradicated (WHO, 2012a). The report by UN Millennium Project shows that proper utilization of antenatal care, skilled attendance at birth and timely access to obstetric care can prevent more than 80% of all the maternal deaths (UN Millennium Project, 2005). Therefore identification of the key barriers to maternal care utilization and the possible solutions to counteract the barriers will significantly reduce unnecessary maternal mortalities among women living in resource poor settings.

### 2.2.2. The role of ANC, PNC and Skilled Attendance at Birth in Maternal Health

The mother’s health condition during pregnancy significantly determines the health outcome of the pregnancy as well as mother and child’s health after delivery. Comprehensive utilization of antenatal care during pregnancy reduces the likeliness of adverse health outcomes caused by pregnancy related complications ((Bloom et al, 1999). Antenatal care is type of preventive care that provides regular check-ups for pregnant women with the aim of preventing, detecting and treating pre-existing conditions and potential health problems throughout the course of pregnancy (McDonagh, 1996; Bloom et al, 1999; Lawn & Kerber, 2006). Antenatal care services
includes identification and management of obstetric complications e.g. preeclampsia, tetanus toxoid immunization, intermittent preventive treatment for malaria and identification and management of infections such as HIV, syphilis and other STIs (Lawn & Kerber, 2006). Hence, the more the woman adhere to ANC visits the higher the chance of having better pregnancy outcomes as she is more likely to deliver under skilled attendance and receive the required obstetric care (Chakraborty et al, 2003; Vanneste et al, 2000; Yanagisawa et al, 2006; Nikiéma et al, 2009).

For example, the proper medical attention under hygienic conditions during delivery reduces the risk of complications and infections that may cause death or serious illness to mother and/or child (UNFPA n.d, p17). Furthermore, severe bleeding after birth can kill a healthy woman within two hours if she is unattended, but proper treatment immediately after childbirth effectively stops excessive bleeding hence reducing the possibility of maternal death due to haemorrhage. Also pre-eclampsia when detected early it can be treated and reduce the risk of developing to convulsions (eclampsia) and other life-threatening complications which are fatal. Infection (Sepsis) after childbirth is less likely to occur for a woman delivering at the health facility where good hygiene is practiced as when early signs of infection are recognized they are treated in a timely manner (WHO, 2012a). Thus ANC visits during pregnancy and skilled attendance at birth plays a significant role in improving women’s health and protecting women against adverse health outcomes.

However, like many developing countries, the ANC utilization in Tanzania is still very low resulting to low percentage of pregnant women who receive the recommended care during pregnancy. For instance, in 2010 only 43% of all pregnant women in the country attended the required minimum of 4 ANC clinics. Furthermore, only 15% of the 43% of women who attended ANC started the first ANC during the first trimester as required and one third of women did not seek ANC until six month or later (TDHS, 2010). Hence, to achieve the full life-saving potential of skilled maternal care and MDGs, more efforts are needed to facilitate the effective utilization and adherence to ANC and PNC clinics by all pregnant women (Lawn & Kerber, 2006). The barriers associated with under/non-utilization of skilled services by women need to be addressed and the proportion of women who seek and receive skilled maternal health services must be increased. This study sought to investigate,
how rural pregnant women’s knowledge on and access to maternal health information influenced their health decisions and healthcare utilization behaviour.

**Role of Non-Governmental Organizations In Maternal Health**

Persisting high maternal mortality rates in Africa and South Asia signify the limitations of government health systems and inability of governments to meet the healthcare needs of their populations (Gill and Carlough, 2008). Hence, to help achieve MDGs several NGOs have stepped in to offer maternal health services in areas where the government health services are not available. NGOs particularly Faith Based Organizations (FBO) has long played a key role in promoting health by building hospitals, clinics and training health workers to improve health services accessibility among disadvantaged communities (Widmer et al, 2011). The range of FBOs run activities have expanded over time and now they are considered important providers of maternal health services particularly in low-resource settings. In most developing countires FBOs are critical in improving maternal health as most of these FBOs work in rural areas where other private and government health services are limited (Essaw, 2011). According to WHO the FBOs own between 30%-70% of the health infrastructure in sub-sahara countries (WHO, 2009). They fill the gap that exists in the health system in poor low resource settings (Gill and Carlough, 2008).

A study done in Africa that included several African countries found that about 40% of healthcare infrastructure in Sub-Saharan Africa are operated by FOBs and they play a key role in provision of essential medicines (Banda et al, 2003). A study done in Uganda found that about 70% of all not-for-profit health facilities are owned by churches. Another study done in Uganda (Lindelöw et al. 2003) which involved 155 health facilitites found that 90% of the facilities were FBOs.
Chand and Patterson (2007) study reported several faith-based program models that were proved to be effective in improving maternal/newborn health outcomes in Mozambique, Tanzania, Uganda, and the Congo. The programs included the delivery of services such as prenatal care, prevention of malaria and sexually transmitted infections, nutrition counseling during pregnancy, and newborn care by religious medical offices and specific religious hospitals (Widmer et al, 2011). The evaluation on before and after the program showed that effective implementation of these programs reduced maternal, newborn, and child mortality and increased the number of women attending prenatal care visits, using a skilled birth attendant, and breastfeeding exclusively. The programs also increased the number of pregnant women taking preventative treatment for malaria, the number of people attending follow-up services for malaria, and the immunization coverage (Widmer et al, 2011).

The FBOs high penetration in rural areas could be contributed by high levels of trust communities hold toward their religious leaders (PCT, 2010). The majority of people in sub-Saharan Africa label themselves as Christians or Muslims, the world's 2 largest religions. The study by Ferret (2005) indicates that approximately 75% of Africans trust their religious leaders. These findings indicate that leveraging the influence of religious leaders and promoting faith-based or faith-inspired health services could be an effective means of addressing the challenges in maternal and child health in Africa (Widmer et al, 2011).

In Tanzania, FBOs also play a major role in provision of maternal health services and general primary care. Primary maternal healthcare is normally offered at the levels of dispensaries, health centres and district hospital which are all managed by the district council. The FBOs in Tanzania represent 40% of the country’s hospitals, 22% of health centres and 13% of dispensaries (MOHSW, 2008c). But, the distribution of health facilities varies between regions, for example in Dodoma where this study was done most health facilities were government owned. (Table 2.2). For instance, in the study area there were only one health centre and two dispensaries which are all government owned.
Partnering with the private health sector and in particular with FBOs is a declared policy goal (MOHSW, 2003), which has been adopted by Tanzania’s Strategy to Accelerate the Reduction of Maternal, Newborn and Child Death (MOHSW, 2008b). The approach aim at improving access to quality health services by joint planning and rational use of resources while cutting duplications and unnecessary competition between providers. Efforts to increase collaboration include contracting of FBO hospitals by the government to step in as Designated District Hospitals in districts without public hospital infrastructure (Tabatabai et al, 2014). This is complemented by the transfer of budgetary allocations via basket funding or the Service Agreement, a contractual arrangement between local government authorities and private health facilities (MOHSW, 2007). However, implementation on the ground remains challenging, resulting in the perception of parallel systems, rather than collaborating and complementary partners (MOHSW, 2008d). But this could be achieved by a more Inclusive partnerships which would increase integration of FBOs into the public health care system and improve coordination and the efficient use of resources (Tabatabai et al, 2014).
2.2.3. Patients Health Information Needs and Accessibility

Previous studies show that after hospital visits most patients tend to seek for additional information from other sources e.g. relatives, pharmacies, friends and internet for more detailed explanations on their health problems (Tang et al, 1997; Theroux, 2011). The research also shows that most patients would like their care providers to suggest to them other credible sources of information (Tang et al, 1997; Theroux, 2011) as the provider recommended sources gives patients alternative access to health information and confidence in the information.

Patient’s tendency of seeking for additional health information besides the one provided by the care providers shows the existing need and gap between the health information needs of the population and the information provided by care providers (Tang et al, 1997). Normally care providers use the hospital visit encounters to provide health education and health information to patients. However, due to limited time during encounters the provided information usually does not meet the information needs of the patients. Many people tend to need more detailed information about their health problems rather than short descriptions and instructions (Daltroy, 1993; Francis et al, 1969). The care provider have regularly fail to become acquainted with patients concerns and preferences (Nelson et al, 2005). Furthermore, care provider’s attitudes towards patients may cause distress (Adams, 2013) leading to patient refrain from asking for more information.

On the other hand, Baker and Pettigrew (1999) argued that patients seek additional health information because of the shortcomings in providing and communicating the health information to the patients. Health information provider’s wrong assumptions about users (Eschenfelder et al, 2004), failure to meet patient’s health information needs and expectations (Wilson and Walsh, 1996; van Zuuren and Wolfs, 1991) and low literacy (Doak et al, 1998) aggravate the gap between the offered health information and the patient’s actual information needs.
The health information needs among patients are different and vary over time (Scott & Thompson, 2003; Chiu & Wistow, 2002). Patients normally need different types of information at different times in life and for different purposes however they often fail to access the health information they need (Scott & Thompson, 2003). According to Scott & Thompson (2003) the major barriers in meeting cancer patient’s health information needs includes: learning difficulties, language or cultural differences and practitioner’s failure to listen and respond to patient’s individual concerns. Chiu and Wistow (2002) stress that the information should be communicated with sensitivity respect and emotional support.

Moreover, as stated by (Somasundaram, 2011) that doctors perceived power as the health professionals and patients as just health illiterate that they cannot understand medical termshence don’t need to know everything affects the provision of health information to patients.Somasundaram, (2011) also asserts that doctors perceiving patients as medical conditions rather than a person or their equals contribute to their attitudes and non-sharing of health information with their patients.

The increasing tendency of the patients and general public to seek for more health information out of those provided to them during encounters presents a significant challenge to the care providers to ensure the adequate access to health information among patients. The research done in Africa show that there most pregnant women do not receive required health information during antenatal visits (Nikiema et al, 2009: Gay et al, 2003; Anya et al, 2008). This led to this study’s main research question whetherthe current low/non utilization of skilled healthcare among pregnant women in Tanzania particularly rural areas was also a result of lack of adequate health information and low knowledge on maternal health and not only due to social-economic factors.

Pregnant women’s access to health information and services is pivotal for a healthier population as it helps them take responsibility of their health and make better informed decisions about their health and that of their families (Henwood et al, 2003). The research show that well informed individuals are likely to take responsibility for their health (e.g. doing regular health check-ups, compliance to treatment and immunizations) and stay healthy for longer than their uninformed counterparts.
(Ransom et al, 2005; Gray et al, 2005; Wathen and Harris, 2007). Hence, to understand the factors underlying pregnant women’s current non/low utilization of skilled services it was necessary to investigate their maternal health knowledge levels and their access to maternal health information.

2.2.4. Health Information Seeking Behaviour

Davenport (1997) defined information behaviour as “how people approach and handle information” which includes searching for it, modifying it, sharing it, hoarding it, and even ignoring it (p.83-84). He described ‘information sharing’ as a voluntary act of making information available to others; ‘handling information overload’ as filtering and overabundance of available information for usefulness; and ‘dealing with multiple meanings as recognising that information items may have different meanings across different functional groups (Davenport, 1997, p87).

Normally people tend to seek health information because they feel that the particular information will help them make informed health decisions and eventually improve their health outcomes (Dunne, 2002; Warner and Procaccino, 2004; Szwajcer et al, 2005). However, it is not always that a person with information needs ends up actually seeking or accessing the particular information (Loiselle, 1995; Matthews et al, 2002; Szwajcer et al, 2005). Like healthcare utilization, there are several factors such as personal values, beliefs, norms and demographic characteristics which influence individual’s actual decision to seek the needed health information (Loiselle, 1995; Matthews et al, 2002). For example the research show that, most active health information seekers tend to be women (Johnson, 1997; Czaja et al, 2003; Percheski and Hargittai, 2011; Fox, 2008), young and educated (Johnson, 1997, Muha et al, 1998; Czaja et al, 2003). This could be due to social responsibility where by a woman is always in charge of household welfare and the family health.

Furthermore, the adequacy and easiness of access to information is also an important factor when seeking health information. According to Eysenbach et al (2002), if the information is adequate and can be accessed in an efficient and effective way at the first level of the information system then that information could be accessed by every
information seeker at any level (national to international) without a need for further processing. Similarly, how the maternal health information is delivered to pregnant women during hospital visits influences their motivation to seek for the additional information.

Moreover, individual’s self-efficacy and high internal locus of control are also found to have significant influence on individual’s actual health information seeking behaviour (Johnson et al, 1997). The extent to which an individual believes she has control over his/her health and the ability to access and act on the information determines the decision as to whether actually seek the health information or not (Lambert & Loiselle, 2007). People usually seek the information which is perceived to be easily accessible and acted on (Gollop, 1997). For a person who has limited access to health information and lacks decision making power with regard to her health condition is less likely for her to be the active seeker and user of health information. Therefore to improve health information seeking behaviour among pregnant women the study also identified the challenges and barriers to maternal health information accession among rural populations in Tanzania.

2.2.5. Sources of Health Information

In recent years there have been increased interest in both developed and developing countries on population’s access to health information (Anasi, 2012). More people are searching for health information on different health issues (Fox, 2005). Patient’s lack of adequate health information from care provider caused individual to search for information from other sources e.g. internet and printed materials.

Before internet and technological boom in 1990s, the general public used traditional media to access health information. The most commonly used health information media was magazines, newspapers (McGuffin and Wright, 2004; Shi et al, 2004; Andreassen et al, 2005; Marshal, 2008)), televisions, radios (Brodie et al, 1999) and other printed material like leaflets, pamphlets, flyers and books (Brodie et al, 1999; Brashers et al, 2002; Warner and Procaccino, 2004; Szwajcer et al, 2005).
The electronic media has also been used in many African countries to promote population’s health. For example, radio soap opera were used in Zimbabwe, Gambia and Ghana to promote family planning (Babalola, 1993). Television programs e.g. ‘Ijue Afya yak’ and ‘Afya ni Uhai’ are used in Tanzania to disseminate health information on public health e.g. Heart diseases, women health, prostate cancers etc. In Siera-Leone they used a radio programs called ‘The Doctor Says’ to disseminate health information on various health issues including sickle cell, diabetes, stroke, abortion and infertility (M’Jimtsu-Sie, 2003).

However, despite its wide reach, the effect of the disseminated information was found to be very low which may have been due to the generic nature of the information provided which fails to meet the specific information needs of the target audience. Also may be due to the type of communication channel used, as it was only a one way communication not allowing recipients to contact senders (care providers) in case of any queries or uncertainties on the received information. Nevertheless, despite its weaknesses the traditional media still play an important role in health information dissemination and promotion of health programs.

In rural areas messages are usually communicated through songs, drama, role play and stories. In Nigeria the Health Workers used songs and dances to disseminate health information to pregnant women and nursing mothers on maternal health during the antenatal clinic visits (Anasi, 2004). In other rural populations, information is disseminated through town criers and women leaders (Anasi, 2012).

Nonetheless, the advent of internet in 2000s subsumed the traditional media functions in the developed world as well as urban areas in developing countries by reaching much wider population with more easy and cost effective ubiquitous accessibility. Patients and the general public could now access a wide range of health information at their fingertips anywhere and anytime they want. Pregnant women are also increasingly turning to the internet to search for additional health information on pregnancy and childbirth (Fox and Jones, 2009; Lagan et al, 2010). According to Patsos (2001) people turn to internet for health information because of its convenience of access (Patsos, 2001); to make better decisions regarding their health (Lorig et al, 2002); to supplement the information they have been provided by their physician
(Patsos, 2001; Fox & Rainie, 2002) or to become more knowledgeable about their own or patient’s health condition (Shuyler and Knight, 2003; Eysenbach and Kohler, 2003).

However, the empirical evidence of the actual usefulness of online information e.g. for personal diagnosis of serious illness is still scarce (Ziebald et al, 2004). According to (Eysenbach and Kohler, 2003; Powell and Clarke, 2002; Shuyler and Knight, 2003) the data is still limited on the ways patients actually use the online health information for, that is the actual reason for searching information online and behaviour of information seekers. Also, there is a problem of language barrier where by most information is presented in English limiting access to other ethnic groups (A. Mat Saat, 2010).

Furthermore, the credibility and reliability of the online health information is still uncertain (Theroux, 2011; Song et al, 2012). The uncertainties on the credibility of the online information has raised some concerns to care providers since the poorly managed health information may lead to negative health outcomes rather than positive ones to the users e.g. increased anxiety and fear (Lambert & Loiselle, 2007). Hence, care providers and health planners still need to take a lead and become the primary source and disseminators of health information to the general public.

### 2.2.6. Access to Health Information in Rural Areas

Population’s access to health information is key for achieving health information for all and the set Millennium Development Goals (Godlee et al, 2004). However, in many rural populations particularly in Africa, the access to health information is still a major challenge (Anasi, 2012; Kreps, 2005; Harris et al, 2006; Chang et al, 2004). For instance, studies by Opeke (2004) and Mabawonku (1998) show that as a result of the increased HIV/AIDS infections more people expressed their desire for more health information on how to protect themselves from contacting HIV.

Mass media and internet have shown great potential in facilitating dissemination and accessibility to health information by the general public. However, these tools are most effective in populations where literacy levels are high and the majority of the
populations have access to the internet, TVs and/or radios. Furthermore, most of the research on patients’ health information accessibility and seeking behaviours done to date have been based in developed countries with focus on health information on diseases like cancer, stroke and other chronic diseases (Borgers et al, 1993; Beaver et al, 1996; Carlsson, 2000; Brereton and Nolan, 2002; Beresford and Sloper, 2003; Andreassen et al, 2005; Hack et al, 2006) and the literature for health information accessibility in the developing countries is still scarce.

These studies have been done in populations where there are very high internet penetration rates and stable health systems with adequate health staff and well equipped health facilities. People usually have several options to access the needed health information, ranging from personal/family GP to online materials. That is when an individual do not feel comfortable with seeking health information from the GP, she can easily go for other sources e.g. magazines or use mobile phones and/or computers to search for online information and obtain the information they want. This might also be the case for the educated, wealthy urban dwellers in the developing countries (Pallikadavath et al, 2004; Navaneetham & Dharmaligham, 2002; Sharma, 2004: Raghupathy, 1996) where majority of people have access to quality health services and internet services.

However, the reverse is true for the poor, isolated and marginalized communities in developing countries. Apart from poor road infrastructures and power problems, well equipped health facilities in these areas tend to be a long way away whilst nearby facilities are extremely understaffed with limited medical equipment and supplies. Furthermore, due to limited connectivity, TVs, radios and online health information are not options in these areas. Thus, the only available credible source of health information remaining in these areas would be the care providers or radios. But, since most health facilities are understaffed, it is very unlikely for the few available health staff to meet the information needs of the patients and people living in the area. This implies that access to the skilled health information from professionals might not be an ideal option either for the people and pregnant women living in non-urban areas. Consequently, majority of the population resort to local or traditional help (Kwesigabo et al, 2012), to people who have lay knowledge on the health problem or have experienced the similar situation before.
Nevertheless, the persisting high maternal mortality rates in Tanzania and developing world in general makes the provision of adequate maternal health information imperative. Previous studies show that lack of awareness on pregnancy danger signs significantly contributed to delays in seeking obstetric care and increased number of maternal deaths caused by pregnancy-related complications (Nikiéma et al., 2009). Knowledge on pregnancy danger signs, appropriate nutrition, breastfeeding, family planning and contraceptives is important to every pregnant woman for better health outcomes of both mother and child.

However, women in non-urban areas have very limited access to health information caused by several contextual, cultural and demographic factors (Nikiéma et al., 2009). Under-staffed health facilities, poverty, norms and cultural practices prevent majority of women from seeking and accessing maternal health information. Hence, it is essential to understand how these women learn about maternal health and how it impacts their healthcare utilization choices. The findings would help in devising solutions which ensures that the unreached communities are reached and transformed to active health information seeker and users. Healthcare providers should try as much as possible to meet the health information needs of the rural population in order to build a well informed and knowledgeable society which is responsible for its health and one that makes better informed health decisions and adopt healthy behaviours (Warner and Procaccino, 2004).

2.2.7. Factors Affecting Pregnant Women’s Healthcare Utilization Behaviour

Healthcare seeking behaviour is the tendency of an individual to seek medical help in response to her ill-health regardless of the nature of care whether formal healthcare (trained health personnel) or informal healthcare (traditional healers) (Ahmed et al., 2001). However, people do differ in their willingness to seek medical help at the onset of illness; some go willingly for treatments whenever they feel unwell while others seek care only when the pain is greater or prolonged and some when in more advanced state of ill-health (Ahmed et al., 2001). Individual’s reaction to ill health is
influenced by various factors including individual’s beliefs, satisfaction and/or perceptions toward the health problem.

Like with any health condition, pregnant women in different settings and contexts also have different ways of dealing with ill-health conditions during pregnancy. Though, the most ideal health seeking behaviour is that at an incident of ill-health a pregnant woman should immediately seek help from trained medical staff in a formal health care facility (MacKian, 2003). However, majority of women in developing countries particularly in rural areas often prefer traditional help as their first point of care than skilled one (Kwesigabo et al, 2012; Ahmed, et al, 2001).

The literature shows that factors like age, parity, education level, access to media, cost and women’s status plays an important role in determining women’s healthcare seeking behaviour hence influencing how they react toward ill-health conditions (LaVeist et, 1995; Perloff et al, 1999; Navaneetham and Dharmalingam, 2002; Tsawe et al, 2015). For instance, younger women who have just started child bearing are more likely to seek skilled attendance at birth than the older ones (Mpembeni et al, 2007). The possible explanation may be because they lack experience in child bearing so they tend to fear home delivery. It may also be because the high proportions of the younger generation have access to formal education making them have a better opinion of skilled maternal services than older generations (Navaneetham & Dharmalingam, 2002; Mpembeni et al, 2007). However other studies found that older women were more likely to seek and use skilled maternal care than the younger ones which may be due to the experience and knowledge they have on the importance of skilled maternal care services or because they have higher decision making power than younger ones (Reynolds et al, 2006; Bell et al, 2003; Elo, 1992; Leslie & Gupta, 1989; Navaneetham & Dharmalingam, 2002; Glei et al, 2003; Burgard, 2004; Mesfin & Farrow, 1996; Reynolds et al, 2006; Tsawe et al, 2015).

Personal experience with previous pregnancies is also a significant predictor of pregnant women’s maternal healthcare-seeking behaviour. The women who had normal home delivery in previous pregnancies whether self-assisted or assisted by a family member or TBA tend to perceive that skilled attendance at birth is unnecessary (Zelalem et al, 2014; Navaneetham & Dharmalingam, 2002; Celik & Hotchkiss,
As a result they do not go for skilled delivery for the subsequent pregnancies. Research also shows that high parity women are less likely to seek skilled maternal care services than their low parity counterparts caused by confidence in their experience with childbirth (Tsawe et al, 2015; Celik & Hotchkiss, 2000; Abbas & Walker, 1986; Bell et al, 2003; Mesfin & Farrow, 1996; Kwast & Liff, 1988). Other studies found that women are more likely to seek skilled delivery for their first pregnancies than subsequent ones due to the uncertainty and perceived high risk of first pregnancies (Wong et al, 1987; Elo, 1992; Chakraborty et al, 2003; Nigussie et al, 2004; Kamal, 2009).

Another important predictor of healthcare seeking behaviour is the education level of a respective pregnant woman. Previous studies show that well educated women are more likely to effectively use skilled maternal health services than less educated ones (Cadwell, 1979; Chakraborty et al, 2003; Celik & Hotchkiss, 2000; Elo, 1992; Schultz, 1980; Kamal, 2009; Leslie & Gupta, 1989; Govindasamy & Ramesh, 1997; Mpembeni et al, 2007; Fotso et al, 2009; Nigussie et al, 2004; Tsawe et al, 2015). It is suggested that the higher usage by educated women may be due to the fact that they are more exposed to maternal health information and media hence they have adequate understanding on the importance of skilled maternal care as well as where to get it (Raghupathy, 1996; Mpembeni et al, 2007; Obermeyer & Potter, 1991). High education levels also enhances woman’s autonomy over her health and increases woman’s confidence in making decisions regarding her health and that of the child (Raghupathy, 1996). Furthermore, spouse’s education level also play a significant role on women’s utilization of skilled maternal healthcare as they are usually the key household decision makers and income controllers who tend to decide where and when to seek care. Women from households where a spouse have relatively high educational level tend to use skilled services more than those with lower education level (Raghupathy, 1996; Rani, 2003; Gage & Calixte, 2006).

Distance to the nearest health facilities has also been found to be among the major barriers to healthcare seeking particularly to people living in non-urban areas (Magadi et al, 2000; Glei et al, 2003). The effect of distance is massive in rural areas due to lack of favorable transportation services and poor road infrastructures leading to demoralization in seeking the healthcare services. Distance to health facilities is often
associated with type 2 delay, a delay in reaching health facility. However it also contributes to type 1 delay where it acts as a disincentive to seek care by the women and/or carers thus delaying their decision (Thaddeus and Maine, 1994). Furthermore, the literature also shows that impact of distance is mediated by other factors such as care charges, cost and perceived quality of care. For example, a study in Kenya showed that the utilization of skilled services was not improved even after the distance to health facilities was reduced by improving road infrastructures (Airey, 1992). That is regardless the distance to health facilities, pregnant women can still effectively utilize health services if are motivated to do so by the quality of care and reduced costs of care.

Previous studies also show that costs related to healthcare seeking is the significant predictor of maternal healthcare utilization among pregnant women. It is also associated with distance to health facilities particularly for women living far from health facilities where they spend more on transport than those living near health facilities (van Eijk et al, 2006). The cost is even higher in instances where the woman is accompanied by other adult(s) and other children who could not be left at home due to unavailability of caretakers (Thaddeus and Maine, 1994). Health service charges e.g. delivery equipment and laboratory tests have been the key limiting factor affecting utilization of skilled maternal health services by majority of low income pregnant women (Overbosch et al, 2004; Mumtaz and Salway, 2005; Myer and Harrison, 2003). The study done by Chowdhury et al (2003) in Bangladesh found that provision of free or subsidized maternal services increased women’s uptake of ANC among urban low-income women. Further, the effect of cost related to healthcare seeking is usually more significant in low income households due to limited income.

The literature also shows that high income women are likely start ANC early and receive adequate ANC throughout the course of pregnancy than the low income counterparts (Magadi et al, 2000; Obermeyer & Potter, 1991; Mpembeni et al, 2007). Furthermore, social support from family and community members has also been found to significantly influence women’s utilization of maternal health services (Erci, 2003). Women from families and communities that offer little or no support to pregnant women are twice more unlikely not to use ANC services than the socially supported women (McCaw-Binns et al, 2007). A study in Bangladesh found that
pregnant women from families where mother-in-laws had a very low opinion of ANC were less likely to utilize the ANC services than those from families which mother-in-law supported ANC (Chowdhury et al, 2003). Also the lack of help with household chores and people to look for other children and accompany a woman to health facilities significantly influences women’s decision to seek care (Thaddeus and Maine, 1994).

The literature also shows that women’s exposure to media significantly affects their utilization levels of skilled maternal services (Navaneetham and Dharmalingam, 2002; Sharma, 2004; Pallikadavath et al, 2004). Women who have high exposure to media e.g. TV, radio, internet are more likely to make more ANC visits than the less exposed counterparts (Navaneetham and Dharmalingam, 2002). The studies in India and Nepal found that watching television at least once a week significantly increased the women’s likeliness of utilizing ANC services more than not watching a Television at all (Sharma, 2004; Pallikadavath et al, 2004).

Additionally, quality of care, healthcare provider’s concern, support, and willingness to provide the needed help to patients significantly influences women’s utilization of health care services and care seeking behaviours (Harris and Dewdney, 1994). The literature shows that women’s negative attitude toward skilled services and care providers affects their readiness to visit health facilities for skilled care (Simkhada et al, 2008). Perceived quality of care (e.g. shortage of drugs and essential supplies) and care providers unfriendliness has caused most women to refrain from seeking skilled maternal services (Mathole et al, 2004).

Other studies show that women’s status in the society determines her autonomy on decisions related to her health. In societies where a woman is considered a weak social entity and not allowed to participate in any decision making, women tend to have very low utilization levels of skilled maternal services. Studies in most developing countries show that women normally do not decide on their own to seek care, the decision is usually made by the spouse or other senior member of the family (Thaddeus and Maine, 1994). For instance, a study done in rural Nigeria found that women in rural Kano do not go for ANC services only because their male partners prohibit it (Adamu & Salihu, 2002). The literature also shows that women from male-
headed households are less likely to utilize skilled maternal health than those from female-headed households (Simkhada et al, 2008).

Lastly, Cultural norms carry significant weight in women’s decision-making, particularly in the choice of a location for birth (Warren, 2010). Studies show that cultural barriers have been a significant determinant of care-seeking behavior in many populations (Mekonnen and Mekonnen 2003; Kwast and Liff 1988; Warren 2010; Seifu, Gebrehiwot and Fantahun 2011; Shimeka, Mazengia and Woldeyohannes 2012; Karim et al. 2010; Stephenson et al. 2006). Culture influences health behaviour in various dimensions. For instance, culture influences the way in which illness is acted upon (Dawitt, 1994 as cited by Kitts, and Roberts, 1996; Erinosho, 2005). Believing that illness is a punishment from God or that the outcome of pregnancy is predetermined by God/Allah can discourage women from seeking care to prevent pregnancy complications or treat complications once they occur. Other cultural factors include gender norms, child marriage and early pregnancy, nutritional taboos, particularly during pregnancy, certain birthing practices, female genital mutilation, and widow inheritance (Idowu, 2013). These factors determine women’s reproductive health decisions including, the number of children they want and how they want their births spaced. Most women do not always get the support they need to fulfill their reproductive needs. In some settings fearing reprisal from disapproving husbands or others, women resort to secret treatments e.g. the use of family planning (UNFPA, 2000).

Furthermore, belief about appropriate behaviour can reduce access to health information and care and impair its quality. Direct taboos and indirect restrictions prevents women from discussing their health needs and risks, while women who cannot readily associate with others have difficulty finding health information and taking healthy steps toward safety in pregnancy. In many rural areas women are controlled with those local customs, whereby a woman can make no decision by herself, until the husband has decided (Kowalewski et.al, 2000). These restrictions mean that women are dependent on the decisions of others about medical attention; whether to delay or prevent pregnancy; have antenatal examinations during pregnancy or arrange for skill delivery attendant. It can be difficult for women to raise
reproductive health concerns; topics such as menstrual bleeding irregularities are especially hard to discuss (Idowu, 2013). This results to some women not getting their problems addressed until their conditions are serious and treatment options are more restricted and costly (UNFPA, 2000).

The common problems that can greatly increase women’s risk in child birth are: delays in recognizing a developing problem; delay in deciding to act; and delay in reaching services because of erroneous belief about pregnancy (Thaddeus and Maine, 1994). In a study by Idowu (2011), majority of women believed that maternal health challenges are normal during pregnancy and as such are not so disposed to proper and adequate antenatal care.

Cultural beliefs is an important aspect to be considered when it comes to people’s healthcare seeking behaviour particularly in rural areas where culture defines and explain what cause certain illness, how it can be treated and who should be consulted. Also people’s perception on how a certain health advice affects their culture or whether it’s relevant to their cultural beliefs affects their reception to information and their readiness to use it. People normally accept or reject information about health risks in a way that is acceptable by their society and in-line with their beliefs and cultural values. Hence, it is necessary for health information providers to include information that is culturally sensitive (Kahan et al, 2009). In order to successfully encourage pregnant women to use skilled healthcare services, socio-cultural traditions challenges need to be addressed and in some cases incorporated into facility-based care (AbouZahr and Wardlaw 2003; Stanton et al, 2007).

Presented above are some of the major barriers to the women’s effective utilization of skilled maternal health services in developing countries identified in the literature (Goldenberg et al, 1992). However, there are variations in the impact of each barrier to women’s maternal care utilization behaviours depending on context and the population under study. To address the problem of non-utilization of skilled maternal services, the context specific strategies and solutions are needed to counteract the barriers existing in the particular society. Unfortunately, most health policies and interventions have been focusing on reducing barriers to care providers (e.g. training more health professionals, increasing health facilities, supplies and equipment) and ignore the many barriers faced by care seekers when seeking healthcare particularly in
the low-income populations and rural dwellers (Ensor and Cooper, 2004). Clear understanding of the context specific factors that influence the use of skilled health services is necessary in order to be able to develop sustainable solutions that will foster the use of skilled healthcare services among these populations.

### 2.3. The Gap In The Literature

The literature review has shown that the low/non-utilization of skilled maternal services is a result of multiple factors ranging from cultural to social-demographic to healthcare provider-related factors. Factors like low education levels, parity, poverty, distance to health facilities and woman’s low status in the society have emerged to be most significant inhibitors in many populations (Simkhada et al, 2008). Furthermore, there were also provider-related factors which have been found to significantly contribute to the non-utilization of skilled maternal services by pregnant women e.g. poor quality health services, health services-related cost and mistreatment by health staff at health facilities (Pokhrel & Sauerborn, 2004).

On the other hand, the theoretical background shows that pregnant women’s utilization of skilled healthcare services (preventive behaviour) during pregnancy and childbirth is influenced by factors such as perceived benefits, perceived severity, perceived susceptibility (from HBM), as well as social norms (from TPB) toward the health behaviour. All these factors are influenced by the amount of maternal health information and health education a pregnant women have about pregnancy and maternal health.

Hence, pregnant women’s decision as to whether or not utilize skilled healthcare services does not depend entirely on social-demographic factors but also her knowledge on maternal health (Nikiema et al, 2009) which depends on the knowledge and access to maternal health information. Previous studies have neglected to examine the importance of adequate maternal health education and health information to pregnant women and how individual’s knowledge on maternal health impacts women’s healthcare utilization behaviours.

The role of adequate health information on maternal healthcare utilization behaviour has been overlooked and under-researched. Little research has been done on the
impact of and awareness (health literacy) of the health problem on individual’s health behaviour (Nikiema et al, 2009; Pokhrel & Sauerborn, 2004). Few studies in Africa (Nikiema et al, 2009) have investigated the provision of health information to pregnant women during pregnancy. No research has been done to investigate rural women’s access to maternal health information (skilled and local) and its impact on pregnant women’s utilization of skilled maternal services.

To successfully improve pregnant women’s utilization of skilled healthcare in the study population, there is a need to understand pregnant women’s knowledge on maternal health, their access to maternal health information and the effects of maternal literacy levels on the utilization of maternal services. Therefore this study was set out to understand how rural women learn about maternal health, the reliability of their current sources of maternal health information, the availability and accessibility of these sources and how women act on the received health information. It also examined pregnant women’s knowledge on maternal health and how it influences women’s maternal care utilization behaviour. The study investigated the impact of local sources of maternal health information on pregnant women’s utilization of skilled services. Local sources referred to community members where pregnant women seek advice and information about maternal health.

2.4. Conceptual Framework

The models described in section 2.1 above represents health behaviour models the researcher used as a conceptual guide for the study. Previous studies that used HBM and TPB were mostly quantitative, however according to Conner and Norman (2005) ‘it is good practice for researcher to conduct semi-structured interviews in order to determine respondents perceptions of the health threat and beliefs about the behaviour in an open-ended manner’. The researcher also used construct from the literature review (quality of maternal service) to investigate its impacts in women’s health information access and healthcare utilization behaviour.

The researcher used five constructs (Perceived Susceptibility, Perceived Severity, Perceived Benefit, Perceived Barriers, Cues to Action and Social Norms) of these models to shed light on personal and social factors underlying pregnant women’s
health seeking behaviours e.g. attendance to routine ANC clinics or promptness in seeking care during ill-health. The theories were used to develop interview questions and focus groups guides.

- **Perceived susceptibility** in maternal health behaviour may include the fact that, a pregnant woman is unlikely to seek skilled maternal care during pregnancy or childbirth if she believes she is unlikely to develop any condition that can lead to complications or death to her or/and the baby. The perception which can be a result of ignorance, past experiences or social pressure, thus understanding what led to that particular perception would be a key toward the change in her perception.

- **Perceived severity or perceived seriousness** construct explains a health behavior where a pregnant woman is likely to do everything to seek skilled attendance if she believes that not doing so may lead to development of pregnancy-related complications which could lead to severe harm or death to herself and/or the baby. Hence, investigating pregnant women’s knowledge and awareness on pregnancy danger signs was key in understanding their healthcare utilization behaviour.

- **Perceived benefit**, that is even if a pregnant woman perceives the health problem to have serious consequences and she is susceptible to it, she won’t adopt healthy behaviours unless she believe she can do it with minimum strain. For example, a rural pregnant woman is less unlikely to make effective use of skilled health services unless she believes she can easily access the services and that it will result to safe delivery and better health conditions for her and the baby.

- **Perceived barriers.** Before deciding to engage on new behaviour people usually weighs costs against the benefits of adopting behaviour. For example, a pregnant woman is unlikely to seek skilled attendance even if it will guarantee safe delivery if she believes the process will be difficult for her due to associated cost, distance or social barriers.
• **Cues to Action** construct, personal experiences e.g loss of a baby, the death of a family member or neighbour during childbirth due to pregnancy related complications can trigger a woman to timely seek skilled attendance at birth and adhere to antenatal care clinics. Also the source (e.g.TBA, skilled care provider and relatives) and content of the maternal health information a pregnant woman receives influences her healthcare seeking behavior. Furthermore, the amount of cues needed to trigger a change in an individual also depends on person’s perceived susceptibility and severity. That is if individual’s perceptions of susceptibility and severity are high then only a slight stimulus is needed to initiate change. Same way if susceptibility and severity perception are low the more powerful stimuli will be needed to instigate change (Redding et al, 2000).

• **Subjective norms** are a person’s own estimate of the social pressure to perform or not perform the particular health behaviour. It includes individual’s beliefs about how other people, who may be in some way important to her would like them to behave (normative beliefs), e.g. ‘my mother-in-law does not like it when I go to the dispensary for ANC or when I fall ill.

The researcher also used some constructs from the empirical literature review to develop a conceptual framework that predict factors that could influence pregnant women’s healthcare seeking behaviour. The researcher adds a new dimension of ‘**perceived healthcare quality**’ which is important factors that determines pregnant
women’s willingness to use skilled maternal services (Uchendu et al, 2013; Nketiah and Hiemenz, 2009; Cronin and Brady, 2000)

### 2.4.1. Operationalization of Constructs

The study focused on investigating the impact of maternal health information access on rural pregnant women’s healthcare seeking behavior. The study provides and understanding of how health information sources and access and social norms influences pregnant women’s perceptions, health decisions and general healthcare seeking behavior. The researcher used various studies in the literature to operationalize the constructs proposed in the conceptual framework.

**Table 2.3: Application of Constructs**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Application</th>
</tr>
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| Perceived Severity    | ➢ Belief about how serious the pregnancy complications and signs are and its consequences  
|                       | ➢ Belief about when and where to seek care whenever experiencing complications/danger signs/labour  |
| Perceived Susceptibility | ➢ Belief about chances of experiencing pregnancy/childbirth complications  
|                       | ➢ Belief about chances of experiencing pregnancy danger signs  |
| Perceived Benefits    | ➢ Belief in efficacy of ANC and early start of attending ANC clinic.  
|                       | ➢ Belief in efficacy of skilled attendance at birth  
|                       | ➢ Belief in efficacy of early seeking of skilled care during labour.  |
| Perceived Barriers                  | Spouse and community support  
| | Quality of the maternal services |
| Cues to Action                     | Belief in efficacy of skilled maternal health education  
| | Sources of maternal health information  
| | Content of the health information provided  
| | Frequency of health information provision |
| Social Norms                       | Pregnant women’s decision making power  
| | Usage of TBA services |

The Interview guide was developed to measure the impact of maternal health information access on pregnant women’s perceptions toward maternal health and their healthcare seeking behavior. Six of the constructs (Perceived severity, perceived susceptibility, perceived benefits, perceived barriers, cues to action, and social norms) were developed from previous studies that used the Health Belief Model and Theory of Planned behavior to investigate various health behaviours (Champion and Skinner, 2008; Carpenter, 2010; Janz and becker, 1984; Harrison et al, 1992; Zimmerman and Vernberg, 1994; Champion, 1984). The seventh construct (perceived Quality of care) is a common factor in most maternal health behavior studies (Airey, 1992; Harris and Dewdney, 1994; Mathole et al, 2004; Nketiah and Hiemenz, 2009, 2004; Uchendu et al, 2013; Nketiah and Hiemenz, 2009; Cronin and Brady, 2000). Additionally, sociodemographic information was also collected from the participants and included age, occupation, marital status and educational level.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1. **Introduction**

This chapter outlines how the research was carried out by providing an overview of the research strategy used in the study to answer research questions and fulfil the research aims and objectives. The chapter describes the research philosophy, design and methods that were adopted for data collection and analysis in order to answer the research questions (Figure 3.1). Research methodology defines how the researcher has gone about studying the phenomenon (Silverman, 2005). It presents the researcher’s view on how the researcher sees the world in relation to the phenomenon that needed to be investigated and the way the researcher think it should be best examined and explained (Young and Atkinson, 2012). While the choice of research method is determined by the study’s ontological, epistemological and methodological base (Corbetta, 2003), the type of data needed and techniques used to collect that data are mainly determined by the research questions, goals and objectives.

![Figure 4.1: The Research Approach Framework](image)

![Figure 3.1: Research Methodology](image)
3.2. Research Philosophy

Research philosophy depicts researcher’s view of the world; researcher’s assumptions about human knowledge and how it is developed which consequently determines methods to be used and how she interpret the findings (Crotty, 1998). It explains the researcher’s methodological choice of research strategy and data collection techniques adopted to answer the research questions. There are two philosophical stances guiding the research process, the research ontology and epistemology.

3.2.1. Research Ontology

Ontology is a branch of research philosophy which is concerned with nature of reality; what constitutes reality and how we can understand its existence. Thus researcher’s ontological position describes researcher’s view on reality and how it exists. The debate primarily revolves around two opposing ontological positions considering the role of social actors and the existence of reality. The objectivist stand is that reality can and should be considered to exist as meaningful phenomena independent of social actors. While Subjectivists and constructionist argue that reality is dependent on social actors and is created through perceptions and consequent actions of affected social actors (Bryman, 2006; Saunders et al, 2007).

Objectivism Vs Subjectivism

In social sciences, objectivism is an ontological position which asserts that social phenomena and their meanings have an existence that is independent of social actors (Bryman, 2006, p16). Things exists as meaningful entities independently of consciousness and experience, that they have truth and meaning residing in them as objects (objective truth and meaning, therefore) and that careful (scientific) research can attain that objective truth and meaning (Crotty, 1998, p5).

Subjectivists on the other hand believe that social phenomena and their meaning are socially constructed created from the perceptions and consequent actions of social actors (Saunders et al, 2007). Subjectivists believe that there no single reality in relation to social phenomena because the social interactions between social actors is an ongoing recurrent process therefore social phenomena are in constant state of revision. Stated by Denzin and Lincoln (1998) that ‘Social life is comprised of
multiple realities that mean different things to different people, hence it cannot be
generalized (Denzin & Lincoln, 1998). The statement by Denzin and Lincoln
emphasizes the importance of understanding a social phenomenon from the
perceptions and meanings that are particular to the population’s context (Denzin &
Lincoln, 1998).

Subjectivism is often associated with Social Constructivism in contrast to cognitive
constructionism which refers to the idea that what we see and experience is
determined or defined in accordance with society and culture; meaning is
‘constructed’ out of a subjective interpretation of phenomenon (Mcnabb, 2008,41).
Constructivists argue that reality comes into being as product of interactions of people
in society, “Reality must be constructed by the observers” (Stahl, 2003, 2879).

The subjective ontology has one major critique that, if the truth only exists as a result
of group consensus on the social phenomenon, then there will be different truth in
different groups. The researcher concurs it is possible to have different truth about a
certain social phenomenon if the study were done in different populations with
different contexts since subjectivists stand is that truth is socially constructed and not
static. For instance, the studies investigating factors affecting pregnant women’s
utilization of skilled healthcare services which have been done in various populations,
have produced varied findings on how and what factors influence women’s healthcare
seeking behaviours. A plausible explanation could be that these studies have been
done in different settings with different populations and different contextual factors
which led to different findings. An understanding of what factors influences women’s
healthcare-seeking behaviours in the particular population is therefore likely to be
obtained from the population and women themselves and an exploration of women’s
and people’s perceptions toward skilled healthcare. This study was conducted in a
new setting and population thus produced findings that are slightly different from
other studies as they were specific to the population under study. Hence adding to the
body of knowledge on how the population specific characteristics and contextual
factors influence healthcare seeking behaviours among rural pregnant women.
3.2.2. Research Epistemology

Research epistemology is defined as the branch of philosophy which is concerned with the validity of knowledge, what is or should be considered as acceptable knowledge and how it is obtained (McNabb, 2008; Bryman, 2006; Saunders et al., 2007). The key question stemming the polarised ontological position outlined above is what constitutes a valid knowledge and how we can obtain it; does the existing knowledge have objective existence or it is only based on people’s beliefs and feelings. There are two major epistemological positions; Positivism and Interpretivism (Denzin & Lincoln, 1998). In practice the position researcher chooses to take tends to be on a sliding scale between the two extremes. For example realism implies there is a recognisable reality but it may be mediated through perceptions. Mixed methods and the gathering of qualitative and quantitative data tend also to some extent mirror these distinctions. Although in the physical sciences a positivist stance is taken naturally.

Positivism Vs. Interpretivism

Gill and Johnson defined positivism as the scientific method of formulating hypotheses about phenomenon and testing them using standardized procedures and data gathering methods (Gill & Johnson, 2010). It is a philosophical position which is based on the view that valid knowledge can only be derived from scientific observation and measurements. Positivists researchers emphasize ‘precise quantitative data and often gather and analyse it using experiments, surveys and statistics; they employ “rigorous exact measures by carefully analysing numbers from the measures” (Neuman, 2006, 66). They focus on using scientific observation and measurements to gather facts, test hypotheses and make generalizations about a social phenomenon (Bryman, 2006).

However, positivism philosophy has one major critique that it assumes people and human behaviour can be studied and quantified just the same way as physics, astronomy or maths. It ignores the fact that abstract laws and formulas are not relevant to the actual lives of real people (Neuman, 1997, 63). Many Social Science researchers (Interpretivists) argue that people and their social world are entirely different from the objects of Natural and Physical Sciences and that they cannot be reduced to numbers and measurements (Bryman, 2006). Nevertheless, other social
scientists take a positivist stance and assume their generalisations are fact and can be replicated. Interpretivism on the other hand believes otherwise on how truth about the phenomenon can be obtained. Defined by Neuman (2004), it is ‘the systematic analysis of socially meaningful action through the direct detailed observation of people in natural settings and interpretations of how people create and maintain their social world’ (Neuman, 2004, 71). While positivist researchers focus on testing researcher-determined hypotheses based on previously defined variables (McNabb, 2008, 41), the interpretivist researchers aim at producing an understanding of the social context of the phenomenon and the process whereby the phenomenon influences and is influenced by the social context (Rowlands, 2005, 82). Interpretative research is built on the view that knowledge is acquired through social interactions that take place through language, group consciousness and shared meanings (Klein & Myers, 1999). It seeks to understand human behaviour in terms of participant’s own experiences, meanings and values (Collis and Hussey, 2003; p53).

In this study the researcher took an interpretivist stance as the research philosophy that guided the study through the research process. The study aimed at studying the impact of maternal health information access to pregnant women’s healthcare seeking and utilization behaviour. The information as to why women in the study population behave the way they do regarding to skilled healthcare seeking behaviour was likely to be obtained through interaction with women and the respective community who live the experience. The personal expression of women’s subjective perceptions, attitudes and reasons as to why they do or do not utilize healthcare services provided the researcher with rich information and helped to explicate the key health information related factors that influence pregnant women’s healthcare utilization behaviour and how it can be facilitated.
3.3. Research Methods

3.3.1. Qualitative Research Methods

Qualitative research method is defined by McNabb (2008, p273) ‘as a set of non-statistical inquiry techniques and processes used to gather data about a social phenomenon’. Holloway (1997) defined qualitative research as a form of social inquiry that focuses on the way people interpret and make sense of their experiences in the world they live (Holloway, 1997; p2). Researchers use qualitative research to investigate social realities by exploring people’s experiences, behaviours and opinions about the phenomenon. The focus is on understanding the social phenomenon within the context rather than measuring it (Collis and Hussey, 2003).

Qualitative research often follows the interpretivist epistemological stance where by the researcher is concerned with understanding of the social phenomenon from participants perspective by examining their experience, meanings and interpretations in relation to the investigated phenomenon (Bryman, 2006). This study aimed at understanding how maternal health information influenced pregnant women’s healthcare seeking and utilization behaviour which could be a result of various factors ranging from individual perceptions, social beliefs to social-structural factors which are often subjective and cannot easily be quantified or measured (Khan, 2008). The best explanation on how and to what extent these factors influence pregnant women’s behaviour was likely to be obtained from people who actually live the experience in their everyday life (Savolainen, 1995). Qualitative researchers usually examine the phenomenon in its natural settings and interpret the phenomenon in that context (Savin-Baden and Major, 2012).

Qualitative research also does not focus on the ‘objective truth’ (one truth which is the same to all people) but rather what and how participant perceive or/and understand as truth, the participants subjective perceptions and experience in reference to the social phenomenon (Slater, 1990; Savin-Baden & Major, 2012). This study will use Phenomenological research design, one of the qualitative enquiry methods to collect data and answer research questions. Phenomenology enables the researcher to investigate and understand the social phenomenon from the perspectives of those who live the phenomenon. The phenomenology design will help to affirm the legitimacy of
the knowledge and perceived truth about women healthcare seeking behaviours and factors influencing their behaviours as the participants are perceived to be experts about the investigated phenomenon.

**Phenomenology Research design**

Phenomenology originates from 20\textsuperscript{th} century European philosophy (Angen, 2000). It focuses on deep description and close analysis of lived experience to understand how meaning is created through embodied perception (Sokolowski, 2000; Stewart & Mickunas, 1974). In phenomenological research, the researcher normally examines individual’s experiences through the description provided by the people who live the experience. The research participants are usually asked to describe their experiences as they perceive them (Patton, 1990). The researcher using phenomenology approach believes that knowledge do not only originate from the educated experts but also in the communities where its members possess local knowledge about social phenomenon and may know better about the situation than the researcher. In this instance therefore current women’s behaviours and what influences their behaviours will be obtained through active interaction with women and the community around them.

Furthermore, the major strength of phenomenolgy research is that the researcher approaches the social phenomenon and the study population with an open mind without any preconceived assumptions and conclusions about the investigated phenomenon. However, this does require the researcher to ‘bracket’ their own preconceptions (Fischer, 2009). The ideas and conclusions emerge as data are collected and analysed. Phenomenology is flexible and accommodates new ideas that may emerge as a result of the interaction with the study participants. In contrary to quantitative research methods where the researcher approach the study group with variables explicitly defined beforehand searching for cause-effect relationship between variables (McNabb, 2008), in phenomenolgy the researcher has to observe and measure only those that become explicit or significant.
Also, the researcher chose phenomenology design over other qualitative research designs due to the following reasons. The Grounded theory was not an option because the study did not aim at developing a theory based on the findings and views of participants. Grounded theory consist of categories, properties and hypotheses that state the relationship among categories and properties though unlike experimental studies, grounded theory hypotheses are tentative and suggestive (Merriam, 2002). Also the researcher did not use case study because in case studies the researcher main focus is on the unit of analysis and not the topic of investigation. The case is a bounded integrated system (Stake, 1990; Merriam, 1998) which seeks to describe a single phenomenon in depth. The study aimed at understanding pregnant women’s healthcare seeking behaviour in relation to maternal health information accessibility. Furthermore, ethnography design was not appropriate for this study because the design disregard the use theory (Wilson & Chaddha, 2010) whereas this study centered on Health Belief Model and Theory of Planned behavior. The narrative research format was not appropriate either because this study was not an exploration of an individual’s stories.

3.4. **Study Population**

The researcher’s choice of study site principally depends on research questions and the study aims and objectives (Silverman, 1999). This study focused on understanding the impact of maternal health information access on rural women’s usage of maternal healthcare services. Thus the most suitable study site was a rural population with access to health facilities providing maternal services but where under-utilization of skilled healthcare services is most evident. Defined by Savin-Baden and Major (2012), study site is the place where the study was be conducted to uncover the meanings on the investigated phenomenon. It is not only where the knowledge is uncovered but also an integral part of the uncovered knowledge itself (Savin-Baden and Major, 2012).
The study was conducted in Chamwino District, one of the seven administrative districts of Dodoma Region in Tanzania for a period of six months. Due to time and resource limitation the researcher selected two (2) of the 32 wards in the district where the problem of maternal mortality and skilled care under-utilization was most prominent. The two selected wards were Msanga and Buigiri wards, each ward consisted of at least 10 villages with 4 to 6 sub-villages each. The typical village often have an average population size of 1000 people. Research participants were selected from five sub-villages of the two wards; Chang’ombe, Makulu B, Kibiriti, Kihamba, and Kolongo sub-villages.

Furthermore, the decision and choice of research site also depend on the accessibility to and availability of the target population (Berg, 2004). Thus to ensure an easy entry and accessibility to the research site and participants the researcher did a three week feasibility study in the area. The researcher contacted the District Medical Officer (DMO) for research permit, also met four community leaders and some of the women in the study area to ask for their approval to support and participate in the study. Fortunately, the permit was granted by DMO, also the contacted community leaders and women accepted to participate in the study.

The major ethnic group in the study site was from Gogo ethnicity, though there were other minor ethnic groups like Nguu, Rangi and Mbuwi. The main economic activity in this population was farming. Further, the majority of the population was under age 15 consisting about 49% of the population. The other 44% was between the age of 15 to 59 years, while the remaining 7% was of age 60 or older. The average adult literacy level of the population was 49% being higher among men (59%) than that of women (41%).
On average, 43% of the population has access to medical services. Access to medical services in this context referred to as being located within 30 minutes of travel from the nearest health facility regardless of the transport type. However, accessibility to health facilities was still somewhat limited particularly to those villages with very poor road infrastructures which also caused variation in general healthcare utilization among populations. The 2010 TDHS showed that households in accessible villages are found to have higher access to and utilization of health services (57%) than those in far remote areas (25%) (TDHS, 2010). Accessible villages are villages located closer to the district capital with all-weather roads and public transport. This study involved population from all groups; educated and uneducated, poor and non-poor, those who have easy access to health facilities and those living far from health facilities. Involving all population groups in the study helped the researcher determine whether these factors were associated with pregnant women’s access to maternal health information and skilled healthcare utilization behaviours.
3.5. **Selection of Research Participants**

In qualitative research methods there are two main types of sampling; theoretical sampling and purposive sampling (Curtis et al, 2000). Theoretical sampling is usually used in grounded theory research which mainly focuses on generating theory (Savin-Baden and Major, 2012). The purposive sampling on the other hand, it is the sampling procedure where by the researcher selects participants based on the set criteria to ensure that participants are only those who are information-rich (Maxwell, 2005). It means the careful selection of the member of the community who are likely to provide the best of information required by the researcher (Savin-Baden and Major, 2012: p314). Taking this into consideration, the study participants consisted of pregnant women, Traditional Birth Attendants and nurses/ midwives in the selected communities.

The aim of qualitative study is usually to explore or describe the diversity in participant’s opinions and experiences in an investigated social phenomenon thus making the issue of sample size relatively less significant (Kumar, 2005). Furthermore, the focus of research is usually not on quantifying the participant’s diverse responses or the extent of diversity but rather to explain the diversity.

However, to fully explore the diversity in the social phenomenon it requires the researcher to reach what is called ‘Saturation Point’ where the researcher does not obtain any new information (Kumar, 2005). Streubert & Carpenter (2003) suggested that, Saturation Point in qualitative research can be obtained with a sample size of 5 to 50 participants. The study involved thirty five (35) participants consisting of twenty five (25) pregnant women, five (5) TBAs and (5) Healthcare staff which is considered as adequate sample size to reach a saturation point. Moreover, the purposive selection of information-rich participants and thier homogeneity facilitated the reaching of the saturation point.
3.5.1. Selection of Pregnant Women Participants

To gain an overview on the number of pregnant women available, the researcher visited the two health facilities in the two chosen wards and requested the maternity register to be available; this also helped to access the names and location of pregnant women available in the study population. Furthermore, to access other pregnant women who have not yet started attending ANC clinic, the researcher asked the help of community health workers and community leaders to identify pregnant women available in their communities to ensure that the study involve as many pregnant women as possible.

Table 3.1: Pregnant Women Participants

<table>
<thead>
<tr>
<th>WARD</th>
<th>SUB-VILLAGE</th>
<th>No. OF PREGNANT WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Msanga</td>
<td>Kihamba</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Kibiriri</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Kolongo</td>
<td>7</td>
</tr>
<tr>
<td>Buigiri</td>
<td>Makulu B</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Chang’ombe</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

However, due to low number of pregnant women that were available at the time of study, all pregnant women available in the five sub-villages of the two wards were selected regardless of the pregnancy gestational age. Furthermore, to facilitate high response rate, the researcher called the community leader in advance to arrange and inform the participants on the expected date of interview with the researcher. The researcher accompanied by the community leader conducted the interviews in pregnant women’s own home.
Before the interview each participant were given a brief introduction about the research and the study aims and objectives. Participants were also given and being read to the Participant’s Information Sheet and the Informed Consent form. A total of twenty nine (29) pregnant women were requested to participate in the study. Twenty five (25) women consented to take part in the study and the other four were not prepared to participate (Table 3.1).

### 3.5.2. Selection of Participating Skilled Care Providers

The nurses with the help of community health workers usually provide the maternal care services in the study population. The selection of nurses/midwives participants was dependent on the number of health staff available in the health facility of the respective community. The researcher obtained the list of health facilities and status of health facility staffing from the District Medical Officer’s (DMO) office. The DMO office also provided the researcher with overview information about the communities (villages) where the under-utilization of skilled maternal healthcare problem was most prominent.

<table>
<thead>
<tr>
<th>Staffing</th>
<th>Registered Nurses (RN)</th>
<th>Enrolled Nurses (EN)</th>
<th>Clinical Officer (CO)</th>
<th>Reproductive &amp; Child Health Aider (RCHA)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Facility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buigiri Dispensary</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Msanga Dispensary</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

In the study population there were two dispensaries, one in each ward. The number of health staff varied between the two facilities. The dispensary in Buigiri ward had a total of seven (7) health staff: One (1) Clinical Officer (she runs the dispensary), two
(2) Enrolled nurses, one (1) Reproductive and Child Health Aider, two (2) Medical Attendants and one (1) Laboratory Technician. The dispensary was serving a population of about 12,000 people. The participant’s selection criteria was that the particular health staff is responsible for pregnant women’s health and provision of maternal health in general. Three (3) health staff (1) CO, 1 nurse, and one (1) RCHA were selected and interviewed (Table 3.2).

The second dispensary in Msanga ward had two (2) health staff; one (1) Registered Nurse and one (1) Enrolled Nurse. The dispensary was serving a population of about 6,000 people. Both nurses were responsible for providing maternal care services to pregnant women in the area hence they were both interviewed.

### 3.5.3. Selection of Traditional Birth Attendants Participants

Traditional Birth Attendants (TBAs) are usually older women in the community who assist women during childbirth and have initially acquired their skills by delivering babies themselves or by working with other TBAs. They normally live in the community, making them more accessible and available than skilled health staff. Their selection was random and it was also subject to their availability and preparedness to participate in the study.

#### Table 3.3: Traditional Birth Attendants (TBAs) Participants

<table>
<thead>
<tr>
<th>Ward</th>
<th>Village</th>
<th>No. of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buigiri</td>
<td>Chang’ombe</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Makulu B</td>
<td>1</td>
</tr>
<tr>
<td>Msanga</td>
<td>Kihamba</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Kolongo</td>
<td>1</td>
</tr>
</tbody>
</table>

To identify and select TBAs to participate in the study, the researcher asked the help of community leaders. Also during interviews, pregnant women were asked to identify any TBA they are aware of in their communities or nearby villages. The researcher accompanied by the community leaders subsequently approached the identified TBA and asked for her consent to participate in the study: explaining the study aims and
objectives. In other cases where health staff worked closely with TBAs, the researcher obtained the names of the TBAs from the particular health staff. Five (5) Traditional Birth Attendants were selected from the two wards: Three(3) from Buigiri ward and the other two (2) from Msanga ward (Table 3.3).

3.6. **Tools for Data Collection**

There are many types of data collection tools used in research which fit different purposes and research types. The researcher’s choice of data collection tool is normally determined by the research epistemology, and the study aims and objectives (Pickard, 2007; Harrell and Bradley, 2009). Use of proper data collection tools ensures that research data is collected in a consistent and scientific way. To achieve the study aims and objectives, two theoretical models (The Health Belief Model and Theory of Planned Behaviour) have been used to identify how access to health information is likely to influence pregnant women’s utilization of maternal healthcare services. The models served as guide for developing interview questions and focus group guides as well as the interpretation of the findings. The researcher examined how variable factors, e.g., maternal health literacy, individual perceptions, cultural beliefs and care provider-related factors affect women’s health behaviours and utilization of skilled maternal services.

To obtain the detailed information about pregnant women’s perceptions and experiences in seeking and accessing maternal health information the researcher used semi-structured interviews and focus group sessions to collect data from research participants. Unlike surveys and structured interviews where the respondent responses are constrained according to the researcher’s predetermined answers, the semi-structured premise allows individuals to express their experiences, feelings and opinions openly, in-detail and in person. Semi-structured interviews and focus groups are similar in that they are both flexible and informal (Longhurst, 2003). They both allow respondents to express their opinions openly and in detail. Furthermore, use of multiple data collection methods increases the reliability and validity of data thus enhancing the research quality.
Moreover, the tools enabled the researcher to share and increase women’s and population’s awareness and education on maternal health. It also helped to increase care provider’s awareness on factors prohibiting pregnant women from using the skilled healthcare services. The researcher presumed that the awareness would help care providers to be more sensitive to women’s cultural and social situations hence finding better ways of encouraging women to use the services (Simkhada et al, 2008) and eventually reduce preventable maternal mortalities in rural areas.

### 3.6.1. Interviews

An Interview is a verbal interchange where by one person (the interviewer) attempts to elicit information from another person (the interviewee) (Dunn & Interviewing, 2005; p79). Research interview is one of the most eminent data collection methods used in both qualitative and quantitative research strategies (Bryman, 2006). Social research interviews aims at eliciting information from respondents (interviewee), the information required to answer the research question(s). There are three main types of interviews: structured interviews, semi-structured interviews and unstructured interviews (Fontana and Frey, 2005).

In structured interviews, the questions are pre-defined and asked exactly in the same order and wording for all respondents. This standardization aims at minimizing the effect of interviewee and interviewer on research results thus maximizing its validity and reliability (Zhang and Wildemuth, 2006). The researcher usually has a specified set of questions in a specific order and often offers the interviewee the fixed range of answers, the interview usually reflects researcher’s concerns (Bryman, 2006). Structured interviews are more like surveys except they are administered verbally instead of writing. It is usually used in quantitative studies where by the interview questions tend to fit the predetermined categories, confirming or refuting the interviewer’s hypothesis. Whereas, in qualitative studies the researcher aims to uncover interviewee’s experiences, meaning and opinions without the researcher imposing their own meanings and experiences (Zhang and Wildemuth, 2006), hence
uses unstructured or semi-structured interviews to elicit information from respondents.

In contrast, in unstructured interviews, the interviewer and interviewee are more like having a conversation (Burgess, 2002). It is defined as interviews in which neither the question nor the answers are predetermined (Minichiello et al., 1990); they rather depend on the interactions between the interviewee and interviewer. It was originally used by anthropologists and sociologist to elicit people’s social realities (Zhang and Wildemuth, 2006). Unstructured interviews are usually informal, open-ended, flexible and free flowing. The researcher normally does not have pre-set questions, though the researcher has some topics she wants to be covered and to give the interviewee some structure and guidance (Chris, 2013). Each interviewee is usually asked a different series of questions, thus reducing the precision and reliability like that of structured interviews.

Furthermore, unstructured interviews are very expensive and time consuming (Patton, 2002). When conducted in a population where the researcher is new, it takes long time to gain trust, establish rapport and gain access to the interviewees (Zhang and Wildemuth, 2006). Since each respondent is asked a different series of questions, the length of each interview might be longer than that of structured or semi-structured interviews (Arksey and Knight, 1999). Hence, due to the research time limitations and above described limitations of structured and unstructured interviews the researcher used semi-structured interviews which is time convenient and grasps the benefits of both structured and unstructured interviews (Pickard and Childs, 2007).

Semi-structured interviews are the most commonly used interview format in qualitative research (DiCicco-Bloom & Crabtree, 2006). Semi-structured interviews are more flexible than structured interviews but less free-flowing than unstructured interviews giving the interviewee the freedom to express their beliefs, feelings and opinions. It offered the researcher an opportunity to access people’s detailed ideas, thoughts and experiences on maternal health from people’s own words without imposed concepts from the researcher. Though the interviewer had established a set of specific topics to be covered, the method allowed for exploration of the themes and ideas that emerged along the process rather than relying on the fixed predetermined
concepts and questions (Harrell and Bradley, 2009). It is also not necessary for the researcher to follow the order of the questions as outlined in the interview guide (Bryman, 2006). The researcher have the discretion about the order the questions are asked, however the questions are often asked in similar order and format to all respondents to allow the comparison between replies become possible and increase validity of the results.

3.6.2. Focus Groups
Focus group is defined by Longhurst (2003) as a group of 6 to 12 people who meet in an informal setting to discuss a particular topic that has been set by the researcher. Also defined by Khan & Manderson (1992) as ‘a form of data collection with the goal of describing and understanding perceptions, interpretations, and beliefs of a select population to gain understanding of a particular issue from the perspectives of the group’s participants. When conducting focus groups the researcher’s role is to keep the group on the topic but also allowing the group members to explore the topic from all viewpoints they see fit. The groups are usually homogeneous, having people who share common ideas and experiences aiming at promoting friendly environment for the group members to freely talk to each other and openly discuss the issue presented (Clifford et al, 2010).

The discussions usually lasts for one or two hours (may be more), the key characteristic being active interactions between group members (Morgan, 1997). This is what differentiates focus groups from semi-structured interview that the researcher gets the information that stems from the group rather than individual opinions. Also a great deal of information is gathered from a larger number of respondents in a short period of time and at low cost (Clifford et al, 2010). It has been argued that, the time taken to conduct two focus groups is more efficient than conducting fifteen individual interviews (Fern, 1982). Furthermore, what made focus groups unique is that discussions provides data which is relatively greater than the sum total of individual interviews or questionnaires. That is, even though the group members have similar experiences, attitudes and opinions; the results are somehow different as they are not
only answering the researcher’s questions but also querying and responding to each other.

Additionally, the researcher used Pairwise Ranking to facilitate discussions and data gathering during focus group discussions. Pairwise Ranking is a Participatory Action Research (PAR) tool used to help a researcher and participants identify and prioritize their preferences on issues discussed. In pair-wise ranking factors or items of interest are compared pair-by-pair and participants are asked which is preferred of the compared two and why (Cavestro, 2003). It allows data to be compared, discussed, adjusted and looked at from different perspective by the participants and a researcher in a way that would otherwise be very difficult in simple discussions with no visual reference (Narayanasamy, 2009).

However, focus group discussion may also have a setback as people might be influenced by the group pressure thus affecting what they say and how they say it hence affecting the data validity (Morgan, 1997). Therefore, supplementing it with individual interviews provided the researcher with more concrete and valid data, as things that could not be said in the group would be said in interviews.

### 3.7. Data Analysis Method

Data analysis section represents the strategy the researcher used for analysing the collected research data. In order to uncover meanings and patterns from the gathered data the researcher needed to analyse information derived from focus groups and interview transcripts. Savin-Baden and Major (2012) defined data analysis as an ongoing process that involves breaking data into meaningful parts for the purpose of examining them (Savin-Baden and Major, 2012; p 434). It is also defined by Hatch (2002) as:

‘organizing and interrogating data in ways that allow researchers to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories (Hatch, 2002; p148).
There are two types of qualitative analytic methods; ones that are attached to theoretical or epistemological position (e.g. grounded theory, conversation analysis, interpretative phenomenological analysis and discourse analysis) and those that are independent of theory or epistemology and can be applied across a range of theoretical and epistemological approaches e.g. content analysis, and thematic analysis (Braun & Clarke, 2006). Further, the choice of data analysis methods depends on the research aims and objectives as it significantly influences the focus of data analysis and the final results (Savin-Baden and Major, 2012). Thematic analysis method was found to align better with research aims and objectives, hence the researcher used thematic analysis method to analyse research data.

Thematic analysis is a method of identifying, analysing and describing important patterns or themes within data (Braun and Clarke, 2006; p79). It enables the researcher to simplify the complex and large amount of qualitative information into themes and patterns which helps the researcher to interpret the phenomenon (Savin-Baden and Major, 2012). Thematic analysis focus on identifying patterns of meanings across a dataset that provide an answer to the research question being addressed. Patterns are identified through a rigorous process of data familiarisation, data coding and theme development and revision (Braun and Clarke, 2006). The added advantage of thematic analysis is that the researcher does not only focus on analysing the frequency of codes or themes across the data but also analyses themes within the data and their meanings in context (Joffe & Yardley, 2003). Themes capture and represent important information about gathered data in relation to the research questions (Braun & Clarke, 2006).

There are two types of themes; the manifest content of data, things that are directly observable from the data, and latent content the information which is implicitly referred to (Joffe & Yardley, 2003). Thematic analyses often represent both types of themes, even when the researcher identifies manifest themes the aim is to discover and understand the latent meanings of the manifest themes observable within the data (Joffe & Yardley, 2003). Since it is not attached to epistemological or theoretical background the researcher used thematic analysis to discover manifest and latent themes based on ideas from previous research as well as new emerging themes and
ideas from the data. Braun and Clarke (2006, 87) divided the thematic analysis process into six stages shown in Table 3.4.

**Table 3.4: Data Analysis Process**

<table>
<thead>
<tr>
<th>PHASE</th>
<th>PROCESS DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Familiarising with own data</td>
</tr>
<tr>
<td>2</td>
<td>Generating initial codes</td>
</tr>
<tr>
<td>3</td>
<td>Searching for themes</td>
</tr>
<tr>
<td>4</td>
<td>Reviewing themes</td>
</tr>
<tr>
<td>5</td>
<td>Defining and naming themes</td>
</tr>
<tr>
<td>6</td>
<td>Producing the report</td>
</tr>
</tbody>
</table>

Furthermore, according to Braun and Clarke (2006), a theme must capture something important about the data in relation to research questions and represent some sort of patterned response or meaning within the data set. Thus, the identification of themes in the study did not depend on the number of prevalence in the data set but rather its relation to and how it inform the overall research question even if it appeared once in
the entire data set. Each theme was given a detailed account of its relationship to the research question and/or its prevalence within and across the entire data set.

3.8. **Ethical Issues and Permission**

The research study involved pregnant women whom are in category of vulnerable group. Millagan et al (2014, 1) define vulnerable people as those individuals or groups who, due to age, ill-health, infirmity, minority status or their otherwise disempowered position in society may be open to exploitation (whether physical, emotional or psychological). It is advised that when dealing with vulnerable groups e.g. pregnant women or children, the researcher needs to ensure that extra care and attention is given (Nickel, 2006). Therefore human participant ethical issues were seriously adhered to.

Before commencing the study, ethical approval was obtained from the Ethical Advisory Sub-committee of Loughborough University (See appendix 1). In the study site, the research permit was obtained from the District Medical Officer’s (DMO) office. The permit (see appendix 5) allowed the researcher to interview pregnant women, and nurses as well as accessing the maternity registers available at the health facilities.

Prior to commencing interviews, the researcher visited the study site in Tanzania where she and explained to the participants the research procedures: research aim and objectives, their level of participation, the number of times they would meet with the researcher, the nature of meetings and the type of questions that would be asked. The researcher also explained to the participants that their participation in the study was completely voluntary and they could opt out any time without having to explain why they have chosen to withdraw. Participants were also reassured that their participation was confidential and all conversations during interviews would remain anonymous.

The participants Information Sheet (see appendix 6) containing all the information about their participation, privacy and confidentiality was given to all participants and for those who could not read the researcher read the information sheet to them.
For all participants who agreed to participate in the study, the consent form (see appendix 7) was given for them to sign. The researcher also read the consent form for those who could not read. All participants were asked for permission to record the interviews using the voice recorder. Both the Information sheet and Consent forms were translated to Swahili (see appendix (8 & 9) the official language in Tanzania.

To ensure confidentiality and anonymity, each interview transcript was given a unique reference number, the reference number indicated the village name and the health facility. As described in the information sheet, no one participant’s name was used anywhere in the report or any other documentation. The reporting of the findings used words such as one woman or other participants to present the findings.
4.1. Introduction
This chapter presents the data collection process and analysis of the data gathered using interviews and focus groups with rural pregnant women, Traditional Birth Attendants (TBAs) and Skilled Healthcare Providers (SCPs). The study aimed at investigating the impact of access to maternal health information on rural pregnant women’s healthcare seeking behaviour. The research central focus was on: the quality of maternal health information and healthcare services offered to the pregnant women; the pregnant women’s knowledge about maternal health and healthcare choices; and the impact of the health information on pregnant women’s maternal healthcare usage and choices.

4.2. Data Collection

4.2.1. Semi-Structured Interviews
The researcher used semi-structured interviews to explore rural pregnant women’s opinions and experiences on maternal health information accessibility and their preferences on maternal care services. The tool allowed the interviewer to facilitate the interviewees to express their views and experiences about the social phenomenon by probing without imposing opinions and experiences to the interviewee (Harrell & Bradley, 2009). It was also very useful in acquiring information from rural populations whose voices are seldom heard. The rural communities normally have experiences and knowledge that are excluded from general understanding of social reality (Hesse-Biber and Leavy, 2006) hence the use of semi-structured interviews allowed pregnant women and care providers living in rural areas to express issues that were based on personal experiences and specific to their population.
Pregnant Women

Pregnant women were interviewed to find out the availability of skilled maternal health information and services; their knowledge on maternal health; and the current maternal care utilization behaviour. The researcher used some constructs from Health Belief Model (Perceived Susceptibility, Perceived Severity, Perceived Benefit and Perceived Barriers) and Theory of Planned Behaviour (Social norms/Normative beliefs) models to develop interview questions. The pregnant women’s interview guide covered the following topics:

- Women’s maternal history
- Quality of maternal services (TBAs and skilled)
- Pregnant women’s perceptions on maternal health
- Pregnant women’s perceived barriers on maternal healthcare usage
- Maternal health information access and Cues to Action
- Social Norms and Healthcare usage (TBAs and Skilled)

Table 4.1: Issues Raised during Pregnant Women’s Interviews

<table>
<thead>
<tr>
<th>Themes Emerged from Interviews with Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Long waiting hours at the health facility</td>
</tr>
<tr>
<td>• Postponement of ANC clinic by the healthcare providers</td>
</tr>
<tr>
<td>• Mistreatment by nurses at the health facility</td>
</tr>
<tr>
<td>• Informal charges</td>
</tr>
<tr>
<td>• Non-provision of health advice during ill health</td>
</tr>
<tr>
<td>• Use of TBAs at the health facility</td>
</tr>
<tr>
<td>• Postponement of ANC start due to absence of prenatal card &amp; photocopying charges</td>
</tr>
<tr>
<td>• Lack of time due to farming activities</td>
</tr>
<tr>
<td>• Support and care offered by TBAs.</td>
</tr>
</tbody>
</table>
Initially most pregnant women were not ready to open up and speak freely about maternal health issues in their community. They feared that if they speak about the care providers, especially the skilled care providers, the researcher would report them to the nurses as a result suffer the consequences e.g. mistreatments, delayed services. Hence, the researcher had to ask the help of community leaders to assure women that the researcher was a neutral researcher and their responses will remain anonymous and confidential. The researcher was accompanied by the community leaders in the early days of the study until the trust was gained from the participating women and their communities. The interviews were conducted at pregnant women’s home and each interview lasted between 45 minutes to 1.30 hours.

**Maternal Care Providers**

Semi-structured interviews were also used to gather information from Traditional Birth Attendants (TBAs) and Nurses who were responsible for offering maternal services to pregnant women in the community. The information from the care providers helped the researcher understand the problem from both consumers and supplier’s points of view. The interview guides for TBAs and nurses contained similar categories to allow comparison between the two types of maternal care that was provided to pregnant women.

**Skilled Care Providers**

The interviews with skilled care providers focused on investigating the quality and availability of skilled maternal services to pregnant women, and the usage of services by the pregnant women. The interview guides covered the following topics:

- Work experience and working environment
- Pregnant women’s utilization of maternal services;
- Availability of maternal services
- Maternal health information provision
- Pregnancy complications management and referrals
However, considering the fact that there were acute shortage of health staff in the health facilities the researcher visited, interviews with nurses had to consider their time limitations and location. Hence, to reduce inconvenience and disruption of services to patients, the interviews were done in the afternoons at the respective dispensary when almost all the patients had already left the premises.

The care providers were interviewed separately in the consultation rooms (Fig 4.1) at their dispensaries. Before the interviews, the researcher presented the Research Permit from DMO’s office and explained the aim of the research to the participants. The participants were given the Information Sheet and Consent form. They were also assured of confidentiality of the process and information they provide. The interviews were done in Swahili and lasted between 1 to 1:30 hours.

**Traditional Birth Attendants**

Traditional Birth Attendants represented the local/traditional care providers the pregnant women use for maternal care services as alternative to skilled care providers. The TBAs interviews focused on the content and quality of care they offer and pregnant women’s usage of their services. The interview guide included the following topics:
The TBAs were very free and talked pleasurably and confidently about their services. They also mentioned some challenges they face e.g. lack of registration cards that formally recognize their services. The interviews with TBAs were done at their homes and lasted for at least one (1) hour.

The findings from traditional care providers and skilled healthcare providers were then compared to find out if there were any similarities or differences in the type and quality of care provided and the pregnant women’s utilization levels of the respective care. Finally, the findings from all interviews (pregnant women, TBAs and nurses) were used to feed the research themes that were discussed in focus groups with pregnant women.

4.2.2. Focus Group Discussions

Focus groups were used as a tool to discover the local knowledge about maternal health issues, for instance how women deal with pregnancy related complications when they arise, and people’s perception toward pregnancy and pregnant women. For pregnant women, focus groups provided a sympathetic environment in which they were able to freely discuss matters concerning their reproductive and maternal health. It enabled women to collectively identify problems affecting their maternal health and care-seeking behaviours as well as possible solutions to the identified problems.

The researcher conducted four (4) focus groups with pregnant women to complement data gathered using semi-structured interviews. Focus groups were used because it was assumed that the respondents may hold back some information during individual interviews due to fear or sensitivity of the information. However, when the same information is discussed by other members in a group, an individual is likely to open up and express themselves as they feel less pressure and cannot be easily pinpointed (Morgan, 1997). The interactions and queries on each other’s comments about their
perceptions on maternal health and the healthcare services resulted in revealing the hidden opinions and concerns that caused most of them to behave the way they did. For instance, during focus group discussion it was revealed that most men refuse to go with their wives in the first ANC clinic due to fear of HIV testing and some spouse’s bribes the care providers to avoid HIV tests. Also, the pregnant women’s delay in starting ANC was partly due to men running away from their wives when they discover that they are pregnant and the lack of prenatal cards at the health facilities. This was not said in one to one interviews.

**Development of focus group discussion topics**

The discussion topics for focus group were developed based on research objectives and the themes that emerged during interviews with pregnant women, TBAs and Skilled care providers. The focus groups discussion covered the following key topics:

- Quality of maternal services
- Perceived barriers of maternal health information
- Usage of TBA services and
- Community’s perceptions on maternal health

Focus groups were important source of information particularly in qualitative research as the conversation between group members told the researcher things about experiences and the social life that would otherwise remain unknown (Hesse-Biber and Leavy, 2006). It opened up some new information to the researcher which were not given during interviews.
### Table 4.2: Topics Discussed in Focus Groups

<table>
<thead>
<tr>
<th>Issues Discussed during Focus Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Healthcare Quality</strong></td>
</tr>
<tr>
<td>• Long waiting hours at the health facility</td>
</tr>
<tr>
<td>• Postponement of ANC clinic by the healthcare providers</td>
</tr>
<tr>
<td>• Mistreatment by nurses at the health facility</td>
</tr>
<tr>
<td>• Informal charges</td>
</tr>
<tr>
<td>• Lack of equipment and supplies</td>
</tr>
<tr>
<td>• Postponement of ANC start due to absence of prenatal card &amp; photocopying charges</td>
</tr>
<tr>
<td>• Lack of confidentiality among skilled care providers</td>
</tr>
<tr>
<td><strong>Maternal Health Information Accessibility</strong></td>
</tr>
<tr>
<td>• Lack of health information</td>
</tr>
<tr>
<td>• Non-provision of health advice during ill health</td>
</tr>
<tr>
<td>• Challenges in accessing maternal health information.</td>
</tr>
<tr>
<td>• Maternal health information preferences</td>
</tr>
<tr>
<td>• Pregnancy danger signs awareness and its management</td>
</tr>
<tr>
<td>• Family planning methods and advantages</td>
</tr>
<tr>
<td><strong>TBA services and Community’s Maternal Knowledge</strong></td>
</tr>
<tr>
<td>• Usage of TBA services</td>
</tr>
<tr>
<td>• Risks of using TBA services</td>
</tr>
<tr>
<td>• Support and care offered by TBAs.</td>
</tr>
<tr>
<td>• Lack of men/spouse support during pregnancy</td>
</tr>
<tr>
<td>• Lack of time due to farming activities</td>
</tr>
<tr>
<td>• Spouse bribes to healthcare providers to avoid HIV tests</td>
</tr>
</tbody>
</table>
More importantly it provided the researcher with an opportunity to share and clarify assumptions and issues on maternal health which were wrongly perceived or misunderstood by the pregnant women in the study population e.g. the need for HIV testing, aim of ANC clinic, family planning methods and the risks of using informal care.

![Researcher sharing maternal health education with pregnant women](image)

**FGD Participants recruitment**

The selection of focus group participants was purposive and due to low number of participants that were available, all interviewed pregnant women were invited (Appendix 10) to participate in focus groups. A total of four (4) focus groups were conducted, two in each Ward. The focus groups participants were grouped according to age and parity. In each Ward, one of the focus group comprised young and first time mothers (Figure 4.3) and the second (2) comprised of older and multiparous women (Figure 4.4).
Figure 4.3: Young and First Time mothers During Focus Group Discussions
Participatory Visual Tools

All focus groups were conducted at the community leader’s houses and lasted between 1.5 to 2 hours each. The focus groups were participatory in nature, the major work was done by the participants themselves with a researcher as just a facilitator. To facilitate participation and presentation of ideas and concepts, visual tools were used (Figure 4.5).
The researcher used pair-wise ranking to identify pregnant women’s healthcare preference on maternal health information and how they perceived the severity of pregnancy danger signs. The identified items were then arranged in a matrix in rows and columns. Pregnant women in the focus groups were asked to compare the two items at once and select the most significant factor and fill in the matrix. The number of occurrences the item appeared represented the significance of that item. Pair-wise ranking was also used to elicit pregnant women’s perception on the identified factors influencing their healthcare seeking behaviours and better clarity on reasons for the existing perceptions.
4.3. **Data Analysis**

4.3.1. **Thematic Analysis**

The researcher used inductive approach to identify the emerging themes where by the coding process was rather data-driven than analyst-driven. The researcher coded the data as she was reading and re-reading through the data, all matters that was thought to be important and/or informing research questions were coded.

Some of the themes were derived from the conversations with participants during interviews and focus group discussions while others were derived from researcher’s analytical assessment of the participants’ responses on possible underlying ideas and assumptions that shaped the response.

The data set for the research study involved twenty five (25) interviews with pregnant women, five (5) interviews with Traditional Birth Attendants (TBAs), five (5) interviews with Skilled Care Providers, and four (4) focus groups with pregnant women. During data analysis process the researcher assumed contextualist method where by the researcher acknowledge how research participants make meanings of their experiences and how these meanings are impacted by the general social context (Braun & Clarke, 2006) particular to the research participants.

4.3.2. **Preliminary Data Analysis**

Preliminary data analysis is an initial stage of analysing most research data and it is usually an ongoing process which is undertaken every time data is collected. It involves a simple process of checking and tracking the data to see what is emerging from the data, identifying areas which require follow-up and actively questioning where the information collected is leading or should lead the researcher (Grbich, 2007; p25). Preliminary analysis focused on understanding the meanings within text or the data gathered and highlighting issues that emerge from the data. It offered the researcher possibilities of collecting new and richer data to explore the themes that emerge and fill the gaps in the information collected. The preliminary analysis of interviews also allowed the researcher to identify issues that needed further clarification from the participants. This helped in identifying issues and topics for focus group discussions.
4.3.3. Coding and Theme Identification

Coding is an initial stage in qualitative data analysis process whereby the researcher seeks to combine and differentiate the gathered data and make reflections about particular information. Codes are defined as tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study (Miles and Huberman, 1994; p56). Data analysis was done with the help of Nvivo 10.0, a software for qualitative data analysis.

Data was collected and transcribed in Swahili which was later translated to English. A total of thirty five (35) interviews and four (4) focus groups were conducted. All sessions were recorded using voice recorder. The transcripts were separately analysed to obtain the patterns and concepts that emerged during each interviews and focus group discussions. Similar patterns and concepts were stored in nodes. The nodes were categorized and re-categorized to generate the potential themes and sub-themes emerging within and across the gathered data. The initial coding resulted to 208 codes which were categorized and reduced to 106 codes (Table 4.6).
### Table 4.3: List of Final Codes (In alphabetical order)

<table>
<thead>
<tr>
<th>A-C</th>
<th>D-F</th>
<th>H</th>
<th>I-L</th>
<th>M-O</th>
<th>P-R</th>
<th>S-V</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC clinic</td>
<td>Diarrhoea</td>
<td>Health and hygiene</td>
<td>Infant deaths</td>
<td>Malaria</td>
<td>Pain</td>
<td>Stillbirth/cues to action</td>
</tr>
<tr>
<td>ANC delay</td>
<td>Dispensary</td>
<td>Health</td>
<td>Infertility problems</td>
<td>Maternal history</td>
<td>Parity</td>
<td>Self-prescription</td>
</tr>
<tr>
<td>Attitudes towards care provider</td>
<td>Decision making power</td>
<td>Health education</td>
<td>Informal charges</td>
<td>Maternal care provision</td>
<td>Perceived need of skilled care</td>
<td>Skilled care providers</td>
</tr>
<tr>
<td>Awareness on ANC</td>
<td>Dissatisfaction with Health Information</td>
<td>Health Information Access</td>
<td>Informal training</td>
<td>Maternal experience</td>
<td>Perceived severity</td>
<td>Skilled delivery</td>
</tr>
<tr>
<td>Perceived severity of pregnancy danger</td>
<td>Dissatisfaction with skilled services</td>
<td>Health Information content</td>
<td>Labour pain</td>
<td>Maternal health awareness</td>
<td>Pregnancy danger signs</td>
<td>Cues to action</td>
</tr>
<tr>
<td>Bleeding</td>
<td>Distance</td>
<td>Health Information Demand</td>
<td>Lack of electricity</td>
<td>Massaging (stomach)</td>
<td>Pregnancy tests</td>
<td>Spouse absence</td>
</tr>
<tr>
<td>Breech position</td>
<td>Distrust of TBA services</td>
<td>Health Information</td>
<td>Long working hours</td>
<td>Media of communication</td>
<td>Pregnancy risks</td>
<td>Spouse refusal</td>
</tr>
<tr>
<td>Childbirth</td>
<td>Equipment and supplies</td>
<td>Health Information provision</td>
<td>Miscarriage</td>
<td>Pregnant women's illiteracy</td>
<td>Satisfaction with TBA services</td>
<td></td>
</tr>
<tr>
<td>Childbirth preparation</td>
<td>Family planning</td>
<td>Health literacy</td>
<td>Mistreatment</td>
<td>Prenatal cards</td>
<td>Stomach pain</td>
<td></td>
</tr>
<tr>
<td>Community members</td>
<td>Family support</td>
<td>Health staff shortage</td>
<td>Mother-in-law/social norms</td>
<td>Quality of care</td>
<td>Social norms</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>Farming</td>
<td>HIV test</td>
<td>Negative attitudes toward skilled care</td>
<td>Razors</td>
<td>Traditional Birth Attendants</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>Home delivery</td>
<td></td>
<td>Overwork</td>
<td>Referral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived benefit of SC</td>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food and Nutrition</td>
<td>Husband</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Attitudes towards care provider: Decision making power, Health education, Informal charges, Maternal care provision, Perceived need of skilled care.

Awareness on ANC: Dissatisfaction with Health Information, Health Information Access, Informal training, Maternal experience, Perceived severity.

Perceived severity of pregnancy danger: Dissatisfaction with skilled services, Health Information content, Labour pain, Maternal health awareness, Pregnancy danger signs.

Bleeding: Distance, Health Information Demand, Lack of electricity, Massaging (stomach), Pregnancy tests.

Breech position: Distrust of TBA services, Health Information, Long working hours, Media of communication, Pregnancy risks.

Childbirth: Equipment and supplies, Health Information provision, Miscarriage, Pregnant women's illiteracy, Satisfaction with TBA services.

Childbirth preparation: Family planning, Health literacy, Mistreatment, Prenatal cards, Stomach pain.

Community members: Family support, Health staff shortage, Mother-in-law/social norms, Quality of care, Social norms.

Costs: Farming, HIV test, Negative attitudes toward skilled care, Razors, Traditional Birth Attendants.

Fever: Home delivery, Overwork, Referral.

Perceived benefit of SC: Hospital.

Food and Nutrition: Husband.

Formal training.

Working environment.
The codes were further re-examined to determine concepts and themes that emerged in the data. Various themes were derived and similar concepts were put together into categories with major themes and sub-themes which was then assigned nodes. The themes were analysed for patterns and relationships. Finally a total of 6 potential categories were derived with 24 main themes and 54 sub-themes.

4.4. Conclusion

In this chapter, the researcher presented the data collection process and analysis procedure. The study was qualitative in nature hence the researcher used semi-structured interviews and focus groups to collect research data. These were the appropriate tools for the study objectives and also in alignment with study’s interpretivist philosophical stance. The data collection tools were carefully developed to ensure collection of reliable and consistent data.

Semi-structured interviews were helpful in gathering perceptions and experiences on the research topic from pregnant women, TBAs and Skilled Care Providers. It helped in unveiling personal experiences and concerns on the accessibility of maternal health information and usage of maternal care services. The data was complemented by the focus groups with pregnant women. Focus group discussions helped to reveal information such as care provider’s mistreatment and attitudes towards them, the information which would otherwise remain unknown due individual’s fear of being identified.

Furthermore, the data was analysed as it was collected. Preliminary data analysis enabled the researcher to supplement and enrich the data. The data was qualitatively analysed using NVivo Software and main themes and sub-themes that emerged from them are presented in figure 4.6. Next chapter (Chapter Five) presents the main findings from the research data based on themes and sub-themes that emerged.
CHAPTER FIVE: FINDINGS

5.1. Introduction

Over 70% of maternal deaths that occur in Tanzania today could be prevented if pregnant women seek and access emergency obstetric care on time (Chou et al, 2012; Hulton et al, 2000). Unskilled attendance at birth and non-adherence to ANC causes late or non-detection of pregnancy complications e.g. haemorrhage, eclampsia, high blood pressure and obstructed labour (Campbell et al., 2006), which contributes to approximately 80% of maternal deaths.

Previous studies show that pregnant women’s utilization of maternal healthcare services is influenced by cultural, economic and social-demographic factors e.g. satisfaction with healthcare services (Paudel et al, 2015), age, parity, decision making power, poverty and education levels (Govindasamy 1994; Khan et al. 1994; Ahmed and Mosley 1997; Regmi and Manandhar 1997; Beegle et al, 2001; Shaikh & Hatcher, 2004). However, other studies show that there are other factors beyond social-demographic and cultural factors that affects women’s behaviour. The accessibility and availability of the healthcare services also significantly affects how pregnant women utilize the skilled healthcare services (Rao and Richard 1984; Sarita and Tuominen 1993; Rohde and Viswanathan 1995; Kumar et al. 1997).

Furthermore, other researchers argued that the availability of maternal services itself does not guarantee its usage either especially if the quality of the services is poor (Hulton et al, 2000). In this study the researcher went further and argues that the availability of quality care does not guarantee usage either if the women are not aware of the importance of the services and not well motivated enough to seek the services. Nonetheless, to reap the benefit of effective usage of skilled healthcare, the services must be available, of good quality and accessible by the pregnant women. The researcher assessed: pregnant women’s demographic characteristics; the availability and quality of the maternal services and pregnant women’s awareness and perceptions of the services (both formal and informal). Also, since the TBAs were still widely used by the pregnant women for maternal care services, the researcher also assessed the quality services offered by the TBAs as well.
5.2. **Descriptive Results**

The study aimed at investigating how pregnant women in rural areas learn about maternal health, their access to skilled maternal health information and its impact on skilled healthcare utilization behaviour. Although the study was qualitative in nature, the researcher also collected some quantitative data which included; the type of care and health information pregnant women received at the health facilities and also women’s demographic information. The study aimed at assessing the quality of maternal healthcare services that were offered at the health facilities and how it affected pregnant women’s access to maternal health information. This section presents the descriptive results of the study and demographic characteristics of the pregnant women involved in the study.

The results presented here aim at complimenting the qualitative findings presented in later section. The demographic information helped the researcher gain deeper understanding of the population under study and better presentation of the findings. However, due to small sample size the results are regarded as neither generalizable nor the representative of the Tanzanian rural population as a whole. Nonetheless the demographic data provided an insight on rural population’s characteristics and would help program managers when planning how to reach rural populations with health information and health education on maternal health to rise their knowledge and awareness on importance of timely seeking and utilizing skilled healthcare services.
Table 5.1: Background Characteristics of the Women Participants

<table>
<thead>
<tr>
<th>Background Characteristics</th>
<th>No. Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-19</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>20-24</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>25-34</td>
<td>11</td>
<td>44%</td>
</tr>
<tr>
<td>35-44</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>24</td>
<td>96%</td>
</tr>
<tr>
<td>Never Married</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Null parous</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Uniparous</td>
<td>13</td>
<td>52%</td>
</tr>
<tr>
<td>Multiparous</td>
<td>9</td>
<td>36%</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>10</td>
<td>40%</td>
</tr>
<tr>
<td>Some primary</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Completed primary</td>
<td>12</td>
<td>48%</td>
</tr>
<tr>
<td>Secondary education</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmers</td>
<td>22</td>
<td>88%</td>
</tr>
<tr>
<td>No occupation</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Media Access (&lt; Once a week)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Mobile phones</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td>Television</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>No Media</td>
<td>16</td>
<td>64%</td>
</tr>
</tbody>
</table>
5.2.1. Participants Demographic Data

**Age and Parity**

The study involved 25 pregnant women from Chamwino District in rural Tanzania who consented to participate in the study. The participants were aged between 18 and 41 years, majority of women were between the ages 25-35 years (52%) with mean age of 28.04. The women in study population normally get married as early as 15 years, majority being married to older men. The youngest participant was 18 years old while the oldest was 41 years. All participants were married except for one who was 19 years and a mother of two (twins).

As they start child bearing at young age, majority of the women in the study population would have between five and seven children by the end of their reproductive period. The mean number of birth to women participants age 35-41 was 6.6 children. Overall, majority of pregnant women (n=12) were multiparous (had three or more pregnancies) before and only three of the participants were first time expecting mothers. Five (41%) of the pregnant women aged 35-41 had given birth to five or more children.

![Figure 5.1: Scatterplot of Women’s number of Children in relation to Age](image)
Furthermore, high parity exposes a pregnant woman to high risks of developing pregnancy and childbirth related complications e.g. malpresentation, low birth weight and placenta previa (Klein, 2005). Three (33.3%) of the multiparous women reported to have had miscarriages before, the other two (22.2%) had infant mortalities and one (11%) woman reported a still birth before.

Another risk is the complication risks associated with teenage pregnancy e.g. postpartum haemorrhage, premature labour, high blood pressure, anaemia, stillbirths and mental disorders such as depression (Klein, 2005; Fraser et al, 1995). As most women started childbearing during teenage years it exposed them to high danger of mortality and morbidity to both the mother and child. The complication risks are due to poor nutritional status, low pregnancy weight and height, undeveloped reproductive organs, and inadequate prenatal care (Goldenberg & Klerman, 1995; Fraser et al, 1995; East & Felice, 1996). Further, it also affected women’s educational attainment, because once a girl is pregnant or married she is very unlikely to continue with her education.

Figure 5.2: Teenage Pregnant women’s Education Levels
Education and Literacy Level

Studies have shown that education level strongly affect women’s reproductive behaviour: fertility, usage of family planning, attitudes and general awareness on maternal health (Nigussie et al, 2004; Mpembeni et al, 2007; Simkhada et al, 2008; Fotso et al, 2009). The literacy level among pregnant women in the study population was also still very low. About half (n=13) of the participants did not complete primary school education and (n=11) among them could not read or write. The remaining (n=12) completed primary education but have not gone on to attain higher education.

![Pregnant Women's Education Level](image)

**Figure 5.3: Pregnant Women's Education Level**

Low education among pregnant women could also been a contributing factor to the limited access to maternal health information. Since, most of these women could not read or write they had limited choices on the sources of maternal health information (e.g. magazines, books) due to lack of ability to read or write. Hence, the findings could be used by program managers and health planners to establish how to reach these populations with health messages.
Education equips pregnant women with knowledge and skills to manage and a better quality of life. Education level correlates the mother’s health and reproductive health behaviour (TDHS, 2010). The low literacy levels exacerbated the effect on maternal health information access at the health facilities. Knowing how to read and write is an added advantage to health information access as women would be able to use other media e.g. leaflets or brochures to access maternal health information. Due to acute shortage of healthcare staff, pregnant women were not provided health information routinely hence ability to access to other media would have significantly improved pregnant women’s access to maternal health information.

Furthermore, due to low literacy most of these women were not able to understand the health information they were offered and hence needed one to one sessions. However, due to the acute shortage of healthcare staff the individual session were not possible. This caused these women to be left out of maternal health knowledge community leading to low utilization of skilled healthcare services.

**Access to Media**

The study also assessed pregnant women’s access to media of maternal health information. Women were asked if they had access to any of the following media: radio; newspaper; mobile phones; television at least once a week. Sixty four (64%) percent (n=16) of the pregnant women had no access to any type media for health information. Only six (24%) participants had access to mobile phones and the other 3 (12%) could access the radio at least once a week (figure 4-2).
Pregnant women’s limited access to media could be due to lower household income levels where families could not afford TVs or mobile phones. Also, could be due to social status where by pregnant women did not have control over finances hence could not own a mobile phones also lack of time to listen to the radio because of household chores unlike their spouses who had ample time to listen to the radios. Moreover, these findings are helpful for health planners when planning and deciding the health information dissemination channels for rural audiences.

**Occupation**

The main occupation of the women in the study population was farming. Twenty two (88%) of the pregnant women were farmers and housewives and the remaining three (22%) were housewives. As the only source of income, during the farming season the pregnant women normally go to the farm from early morning to late evening. It was found that men in the study population did not consider pregnancy something special or a health issue.
Also as the patriarch society, men controlled all the finance and women had to depend financially on their partners. Thus, pregnant women had to work hard to earn any money for household expenses and healthcare related costs which contributed to the delay in starting going to the ANC clinic due to lack of time and support from spouses. This highlighted the importance of community wide Public Health education to raise awareness on maternal health so that pregnant women in rural areas would receive support and help they need during pregnancy, childbirth and postnatal.

5.3. **Quality and Availability of Skilled Maternal Care Services**

Quality of care is defined as the degree to which maternal health services for the individual and population increase the likelihood of timely and appropriate treatment for the purpose of achieving desired outcomes which are both consistent with the current professional knowledge and uphold basic reproductive rights (Hulton et al, 2000, p9). In this context the quality of care was assessed in two aspects: the quality of the care provided by care providers at the health facility and as well as at the TBAs and; the user’s perceived quality of care based on their personal experiences. The elements of the quality of care by care providers included: quality of physical and human resources, referral system efficiency and the effectiveness of the emergency management. That is how well equipped the health facility and TBAs were, the skills competency of the care providers, the availability and efficiency of referral process and the availability and accessibility to emergency services.

On the other hand, the user perceived quality focused on how pregnant women perceived the quality of the medical equipment, the services and overall treatment by the care providers (Fawole et al, 2008; Birungi et al, 2009). The pregnant women were asked for their opinion on the quality of maternal services provided by both TBAs and skilled healthcare staff. Their responses helped to ascertain pregnant women’s attitudes towards the services they received at the health facilities and/or the TBAs. Figure 5.5 provides the detailed description of themes and sub-themes that emerged under The ‘Quality of Maternal Care Services’ category.
The quantity and quality of health and supporting staff that work to deliver maternal care services to pregnant women determines the quality of services offered (De Geyndt, 1995). That is skills, experiences, working hours and salary/incentives of the care providers influence the quality of maternal services provided to pregnant women. It is conceivable that when health personnel who are competent and motivated, they would treat and respond well to pregnant women’s healthcare needs when they go for services unlike when there is a staff shortage and poor working conditions. The pregnant women in the study population accessed maternal health services from the Dispensary the second lowest health facility in the Tanzanian Health System (refer figure 1.1).

Dispensary was the nearest health facility in the study population that offered primary maternal and child healthcare, it was also responsible for treating simple pregnancy
complications like anaemia and assisting normal deliveries. However, like many other health facilities (Pfeiffer & Mwaipopo, 2013; Simkhada et al, 2008; Mwaniki et al, 2002), the dispensary in the study site was among the ill-equipped health facilities in Tanzania. There was acute shortage of health staff and dire lack of medical equipment and supplies.

The required average number of health personnel in a dispensary is 17 healthcare staff (MoHSW, 2014), however the health facilities in the study population were found to have less than 16% of the required number. In the first health facility (Buigiri dispensary) there were seven (7) healthcare staff (1 Clinical Officer, 2 nurses, 2 medical attendants, 1 lab technician and 1 RCH aider) while in the second health facility (Msanga Dispensary) there were only two healthcare staff, both were nurses. This was the acute shortage of health personnel which significantly affected the quality of maternal care services provided and its accessibility to the pregnant women in the area. Figure 5.6 shows the levels of healthcare personnel of the two dispensaries at the study population.

Figure 5.6: Status of Healthcare Personnel in Health Facilities
The health facilities served an average population of 6000 people each. Hence, the existing health staff shortage placed a huge burden on the available healthcare providers. Most of the health personnel required to support delivery of maternal services were not available. There was only one Clinical Officer at the Buigiri dispensary, whereas there were no administrative staff, pharmacist or medical attendants in both dispensaries. The acute shortage of staff, resulted in the available health staff assuming the roles of missing personnel. They took up the roles and responsibilities of other health personnel and had to attend all the patients that came to the dispensary. Responding to the question on the state of staffing on their health facility, the nurses from Msanga dispensary stated;

“We are two nurses running the dispensary and we are responsible for everything in here. Both of us are nurses by qualification but also we assume the roles of doctors, pharmacists and lab technicians who are not available” (NurseM1).

“The dispensary have only two nurses and I’m the only one living near the dispensary, so I work almost 24hrs because whenever there is an emergency or delivery at night they come to call me” (NurseM2).

The health facility in Buigiri ward was relatively better staffed (seven health staff) compared to the one in Msanga ward. The dispensary was also located near the main road connecting two districts hence it was more accessible by many people and had relatively more patients. The Clinical Officer and a nurse from Buigiri Dispensary reiterated the problem of healthcare personnel shortage.

“The dispensary have three nurses but one of them is absent at moment she is in sick leave. So only two of us and sometimes the Clinical officer assists us in attending the pregnant women. But there are so many people in this area, at times I find myself working 24 hours because I live near the Dispensary” (NurseB1).
“There are seven health staff here but still we are not enough. As you can see the dispensary is near the main road many people always come here for healthcare services, I can say we work almost 24 hours” (Clinical Officer).

As the only healthcare personnel at the health facilities, they also had to attend to other patients coming to the dispensary for healthcare services hence putting more pressure to the healthcare staff. The acute shortage of healthcare personnel caused the available health staff to work longer hours to cater for healthcare needs of the community. Most of the time they worked overtime for almost twenty four hours every day as it was impossible to have work shifts due to the staff shortage. The researcher argues that with the existing acute shortage of the healthcare staff it was improbable for the skilled care providers to offer quality maternal care services.

5.3.2. Quality of Skilled Healthcare Services

The life-saving potential of skilled healthcare is on the timeliness in accessing quality obstetric care during childbirth or when the complication rises. The availability of healthcare personnel alone is not enough if there are no sufficient infrastructures, and equipment and supplies to work with (WHO, 2015; Hulton et al, 2000). The provision of the quality care requires both sufficient healthcare staff and proper equipment and supplies. However, in addition to the acute shortage of healthcare personnel the health facilities in the study population had dire shortage of essential drugs, and medical equipment. The overall working conditions of the healthcare providers was very poor with one dispensary lacking electricity. Figure 5.7 shows the state of the labour ward at Msanga and Buigiri dispensary.
As the facility offering maternal care services, the dispensary should have been able to offer antibiotics, oxytocin (injectable), assist normal delivery and manual removal of the placenta (WHO, 1996). However, in both dispensaries there was critical lack of essential equipment and drugs especially antibiotics. The following pregnant women expressed their dissatisfaction with the drugs shortage at the health facilities:

“When you are sick and go to the dispensary, all they have is Paracetamol, other medicines we are told to buy them at the drugstore” (Isa Kolongo).

“I don’t like going to the dispensary because they always say that they do not have drugs. That’s why whenever I feel sick I just go straight to the drugstore and buy paracetamol” (IPa Kihamba).
“In the dispensary they don’t have very good healthcare services, most of the times they say there are no drugs. Sometimes we are even told to bring our own gloves when we go for childbirth” (IBE Kibiriti).

The pregnant women’s concerns about the lack of supplies at the health facilities were confirmed by the nurses from Msanga and Buigiri dispensary. Responding to women’s complaints the nurses stated:

“Normally we do not charge for maternal services, unless it happens that there are no gloves or gauze a woman has to go and buy it herself. In extreme conditions we sometimes do attend women without gloves” (NurseM1).

“Sometimes there are shortages of drugs and supplies, then we tell the women to buy from the drugstore. For instance, now we do not have clinic cards, when pregnant women come to start ANC clinic she has to make a copy but for those who can’t afford they have to wait until we get the cards” (NurseB2).

The pregnant women’s statements above shown their disappointment with the services at the health facilities which also explain their low healthcare utilization levels. Furthermore, there was a lack of electricity at Msanga dispensary which discouraged women’s usage even more. Several women pointed out that at night they would rather go to the TBA than the dispensary because they both use lamps except the TBAs are near and can be called home.

On the other hand, the lack of electricity at Msanga dispensary worsen the care provider’s working conditions. Nurses reported to use torches and lamps when attending pregnant women at nights.

“As you can see, there is no electricity in the dispensary, therefore at night we normally use lamps when assisting a childbirth. Sometimes the women complain saying there is no point of walking long distance coming to the
dispensary for delivery at night because there is no electricity and we use torch and lamps just like the TBAs” (NurseM1).

“It is very hard attending a pregnant woman at night because we do not have electricity, we usually use lamps and torches at night. I’m the only one living near the dispensary so all night deliveries I have to do it alone, it’s hard” (NurseM2).

The lack of equipment and supplies limited the care provider’s ability to provide the quality maternal services to the pregnant women. As a result of poor quality of health services provided at the health facilities, majority of women had negative attitude toward care providers which could have affected their healthcare utilization levels.

5.3.3. Functionality of the referral System

The poor state of dispensaries led to the increased referrals where the pregnant women with some health concerns were referred to the Health Centre or other higher level facilities for advanced care. The healthcare providers reported failing to perform some important tests mainly because they lacked the proper medical equipment.

“We do not have the equipment for blood and urine tests here, we usually tell the women to go to the Health Centre for the tests” (NurseM2).

“We only offer basic care here, mainly it’s checking women’s blood pressure and weight. We donot do blood tests, the women are told go to the Health Centre for other tests” (Clinical Officer).

“We do not do blood or urine tests because we don’t have the equipment here, we usually refer women to the Health Centre” (NurseM1).

The basic maternal care services includes at least four ANC visits to monitor expecting mother’s health (checking mother’s blood pressure, height and weight, blood and urine tests) and early identification and management of pregnancy related
complications. It also includes information on maternal health, education and advice on family planning, pregnancy health, labour and childbirth and childcare. However, with the limited working conditions, it was very unlikely for the healthcare providers to offer quality maternal care services to pregnant women in the area. Figure 5.8 shows the pregnant women’s access to basic maternal tests and check-ups during the perinatal period.

Most of the high risk pregnancies could be detected during ANC visits and women referred to a higher health facilities for delivery ahead of time. But, there are complications that rise during childbirth or late stages of labour which require an immediate access to appropriate emergency obstetric care. It is then the efficiency and effectiveness of the referral system that determines the outcome of the particular maternal complications (Hulton et al. 2000).

The dispensary was the lowest health facility that offered maternal services hence the complex cases were referred to the Health Centre (5 Km away) or the General Hospital (40 Km away). Due to poor road infrastructures, shortage of ambulances and poor communication system, the referral process was poor and undesirable by most women and families. Whenever a complication emerged and a woman needed a
referral the nurses at the dispensary normally called for ambulance from the Health Centre.

“Whenever there is a referral we usually call the ambulance from the Health Centre but it happens that sometimes the ambulance is not available therefore a woman or relatives have to hire a car to take her to the Health Centre”(NurseM1).

“Sometimes the ambulance is not at the health centre, so to avoid other risks we tell the woman or her relatives to hire a motorcycle and rush to the health centre” (Clinical Officer).

“It happens at times the ambulance is not available or so we have to wait while observing the patient (sometimes for two hrs) especially when the patient condition does not allow to take her on the motorcycle”(NurseB2).

The referral process was still a challenge in the study population. There was only one ambulance serving three dispensaries and one Health Centre making it unreliable when needed. The statements from healthcare providers show that, due to shortage, most of the times the ambulance was not available and to save mother’s life, the family had to find and pay for alternative transport. The transport costs associated with the referral and the unreliability of ambulance services during emergency contributed to pregnant women’s non-compliance to referrals. Hence, to increase pregnant women’s compliance to referrals there is a need to improve ambulance services and streamline the referral process.
5.3.4. Negative Attitude Towards Healthcare Providers

Provision of quality maternal health services has remained a major challenge in many developing countries particularly in rural areas. Similar to other findings from Kenya (Mwaniki et al 2002), Zimbabwe (Mathole et al, 2004) and South Africa (Myer and Harrison, 2003) the women in the study population expressed the healthcare providers as impolite, mean and non-compassionate.

“One of the nurses is very mean, sometimes when you go in she get out and come back hours later. You have to wait until she comes back otherwise if you decide to leave and come back another day she scolds you” (IPa Kihamba).

“They should value us and use polite language toward us, when we go there they should at least try to be friendly. The last time I went there, I had issues with my husband (he ran away) I couldn’t go with him in the first ANC clinic, the nurse didn’t even listen to me she just sent me back. I have not gone back to the clinic again and I don’t know how old my pregnancy is now” (IK Makulu). (It turned out she was 9 months pregnant, she delivered two weeks later).

“I wish the nurses could be more supportive to women during labour and childbirth. They don’t treat us well when we go there, I remember one woman had to give birth at the dispensary door because the nurse delayed to come when we called her. Also another woman delivered at the dispensary toilet”(ISo Kibiriti).

“Sometimes you can get there early in the morning and wait until late afternoon but also if she feels tired she will just tell you to go home and return the next day. Sometimes even when you go the other day she still doesn’t attend to you, it is very discouraging”(IL Kihamba).
Pregnant women mentioned long waiting hours at the ANC clinic as one of the factors discouraging their adherence to ANC appointments and negative attitudes towards skilled services. Due to shortage of healthcare personnel, pregnant women had to que up (Figure 5.9) for hours waiting for ANC services which was sometimes postponed. For instance, during the farming season it was difficult for women to give up another day to go for ANC as a result others decided to delay ANC until they finished farming activities.
The individual’s attitude and satisfaction with the healthcare services determines his/her utilization of the particular services (Srivastarva et al, 2015; Aldana et al., 2001). Therefore, unless the skilled healthcare services are improved and pregnant women attitudes are changed their healthcare seeking behaviour is very unlikely to improve.

5.4. Quality of Traditional Birth Attendant’s Services

5.4.1. Traditional Birth Attendants Services

Traditional Birth Attendants (TBA) are community based care providers that offers maternal care to pregnant women during pregnancy and assisted women in childbirth. The Safe Motherhood Initiative proposed the integration of TBAs to the formal healthcare system to increase skilled attendance at birth (WHO, 1992). The integration aimed at using TBAs as a link between pregnant women and the formal healthcare system by encouraging pregnant women to timely seek skilled healthcare during labour. Although their contribution is still controversial (Sibley et al, 2004) the governments in developing countries including Tanzania recognizes and promotes the TBAs through training.

Like in other populations (Pfeiffer & Mwaipopo, 2013; Bhardwaj et al, 1990; Saravanan et al, 2010), the TBAs were still widely used by pregnant women for pregnancy care and childbirth services. They were trusted and retained an important position in their community (Sibley et al, 2007). Most of the TBAs were also Traditional Healers and they were believed to be capable of solving infertility problems or any other health problem using the traditional medicines.

Since pregnant women used TBA’s services despite of the availability of health facilities in the community, the researcher had to examine the quality of maternal care services offered by TBAs and what influenced pregnant women’s choice of care. There were about eight TBAs in both Buigiri and Msanga communities that offered maternal services. The researcher interviewed five of them: three (3) TBAs from Buigiri and two (2) from Msanga wards, the other three TBAs were not available at
the time. All TBAs were older women aged 55 years or older and most had basic knowledge on maternal health and some even used tools e.g. gloves when attending pregnant women during childbirth.

Unlike the nurses at the health facilities, the Traditional Birth Attendants seemed to work in a more relaxed environment. Despite of being small in number, they had to attend fewer patient at a time compared to the healthcare staff at the health facilities. Responding to the question on the number of pregnant women they attend in a month, the following TBAs stated;

“It’s not very consistent nowadays it varies with time, some months if I’m lucky I can get 10 women in one month, other months I can have only 3 women coming for my services” (TBA1).

“Nowadays they don’t come to us much, they go to the dispensary for services. But few still come, in one month I can get up to 5 or 8 women” (TBA2).

“…It depends, but I usually attend 5 to 10 pregnant women per month, nowadays many women prefer going to the dispensary for maternal services” (TBA3).

The small number of pregnant women the TBAs had to attend could be a positive indicator that more women have become aware of the importance skilled healthcare services hence they no longer use TBA services. However, majority in this group were the first time (primipara) mothers which could be due to the perceived risks of first pregnancies (Chakraborty et al, 2003; Nigussie et al, 2004; Kamal, 2009) but the multipara women still preferred TBAs over skilled care.

Furthermore, the fewer number of patients at the TBAs could partly explain their motherly treatment and positive attitude towards pregnant women when they went for maternal services. Since they attended fewer patients at a time, it was easier for them to provide the affection, and attention to pregnant women unlike the overworked skilled care providers. Most of the women who have been to the Traditional Birth Attendants for maternal services reported to being satisfied with the services. The following women stated:
“I like how she takes care of me when I go there, she is very kind. I wish they could give her a TBA’s competency certificate because she is the only one in the village and many other women depend on her” (IE Kihamba).

“I am satisfied with TBA’s services, whenever I have any problem or pain I just go to the TBA she treats me well. She usually massages my stomach and the pain stops. I like her services” (ISt Kihamba).

“I always go to TBA because I like her services and I’m satisfied. To me their services are just the same as that of the hospital so I don’t see why I should go to the dispensary” (IMar Kolongo).

The TBAs were highly respected and trusted member of society, making the utilization of their services by pregnant women inevitable. Also because they live in the community, the TBAs were more accessible by pregnant women as they could be called at home when needed. Also the mode of payment that allowed women to pay in kind when they do not have money contributed to women’s preference over TBA’s services. However, there were still risks to pregnant women as most TBAs do not have bio-medical skills and proper medical equipment to handle complicated cases.

### 5.4.2. Quality of TBA’s Services

The TBAs did not offer any specified ANC services, they rather attended to pregnant women’s health problems as they came. Other than childbirth services, most cases were the stomach pains and bleeding in which the TBAs would just massage the respective woman and/or offer the traditional medicines. Four of the five TBAs were also the Traditional Healers who offered traditional medicines to pregnant women with problems like bleeding or vaginal discharge.
On the other hand, some of the TBAs seemed to be working closely with the skilled healthcare providers and were highly conscious of risks and dangers of dealing with high risk pregnancies. Furthermore, majority were aware of the dangers and risks associated with unsafe practices hence they emphasized the use of gloves and brand new razors when assisting women during childbirth. Some reported to refuse to attend women when they did not come with the new razors or gloves.

“I remember one time I refused to attend a woman because she called me at late stages and she did not have gloves. Women used to think that the dispensary gives us gloves while the fact is I was using my own money to buy them, when I told them to pay for gloves they refused saying we are given at the dispensary” (TBA2).

“If I see that the cervix has not fully dilated and the baby is already coming out I normally use a razor to increase the passage. But to tell the truth we do not stitch, we just use hot water to soothe the wound and a woman become fine. Every woman when she becomes pregnant she makes sure that she have a new razor with her at all times” (TBA4).

It was evident that TBAs did not have adequate equipment for maternal and childbirth services but they still assisted many pregnant women in childbirth using the limited tools they had. The lack of equipment posed risks of infections and deaths to mothers but also the health risks to TBAs when women were attended without protections. TBAs also highlighted other reasons why women preferred their services despite the Health facilities being in the vicinity. The infertility problems and traditional beliefs that if the TBA helped you to get pregnant you must first go to her before going to the dispensary for childbirth.

“They come to me because I offer medicines they can't find at the hospital. My traditional medicines helps infertile women conceive and those with bleeding problem it helps to stop the bleeding” (TBA1).
“They come to me because you find that most of them have already been to the hospital but their problems were not cured so then they come to me for traditional medicines” (TBA5).

“Some of them have infertility problems and they have been to the hospitals without any results. When they come to me I examine the problem and give them some herbals that helps a woman to conceive” (TBA3).

The Clinical Officer and a nurse reiterated the TBAs statements:

“I tried to find out why the women still prefer home delivery and I came to realize that most of them are those who went to the TBA for infertility problems. The women believed that since it was the TBA’s medicine that cured her and made her conceive she must go back to the TBA for safe delivery” (Clinical Officer).

“Also, there was a problem of cultural beliefs, some women believed that they must pass through the TBA before coming to the dispensary for the childbirth otherwise they would not give birth” (NurseM1).

Generally, the Traditional Birth Attendants are helpful and rural pregnant women will continue using their services. However, the poor tools and environment they use to attend women is still something to be concerned about for the safety of pregnant women. Nurses at the health facilities acknowledged that TBAs were helpful at times nonetheless they expressed their concerns on the risks involved due to the lack of proper equipment.

“They are very helpful, they only need more training. But it is very risky because most of them do not have proper equipment, for instance if a woman do not have a razor they can use anything instead, this can lead to infections to a mother” (NurseM2).
“**TBAs are very helpful** but they should be given more training because they lack necessary equipment. Use of bare hands when assisting a woman during childbirth put their health at risk of infection of diseases e.g. **HIV**” (NurseB1).

“**Frankly speaking, they are very helpful** and I wish the government could recognize them. Because the society trust them very much, we can’t stop the TBAs from working completely because people will still go there” (NurseM1).

Concerns about the quality of the equipment and reliability of TBAs services were also expressed by some of the pregnant women. Most women doubted TBA’s ability to handle obstetric complications when they rise otherwise they were okay with TBA services.

“**TBAs provide good services but they don’t have proper medical equipment.** For instance if the baby is not moving or labour is prolonged she can’t help but in the hospital they can induce labour to help you deliver” (IH Chang’ombe).

“The only problem with Traditional Birth Attendants is that they don’t have the equipment. For cases where a woman need more blood or water the TBAs can’t help with that, that’s why I prefer going to the hospital for childbirth” (IMg Kibiriti).

“They are helpful but I don’t intend to go to the TBA again because last time I had a still birth, the baby was too big I couldn’t have delivered without an operation and the baby died. But if was in the hospital may be they could have operated me” (IVe Kihamba).

It is apparent the women were aware of the limitations of the TBAs services and yet they used the services. Nonetheless, TBAs were perceived to have more services to offer (fertility and pregnancy protection solutions) than the Skilled Healthcare Providers. Their nurturing and loving care made the women to feel secure and cared
for hence continued using their services despite the limitations. However, the TBA’s services were based on experiences and not expertise thus still there were risks involved. The pregnant women’s need for skilled healthcare is indispensable and cannot be substituted if we are to reduce maternal deaths in rural areas. It is probable that if the services at the health facilities were a much better, more pregnant women would opt for skilled services instead of TBA’s.

5.4.3. Traditional Birth Attendant’s Referrals

It was apparent that the TBAs are helpful and still widely used by rural pregnant women for maternal care services. The Tanzanian Health Policy promotes TBAs to help women with maternal and neonatal counselling and initiating timely seeking of skilled care during labour (Pfeiffer & Mwaipopo, 2013). They are not allowed to assist in childbirth except in extreme cases where the woman could not make it to the health facility in time for delivery, in the situation the TBA is advised to escort a woman to the health facility immediately after birth. However, due to poor quality of maternal health services the TBAs still assist many women in childbirth and because of their limited equipment quality and expertise there are cases they could not handle hence needed help from other care providers such as fellow TBAs and/or Skilled Healthcare Providers.

The Traditional Birth Attendants have their own referral process, if there was a complication they could not handle they normally sought help from other TBAs first before referring a woman to the health facility. The few who had good relationship with skilled care providers they referred women to the health facility directly or called for help from the skilled care providers.

“When it happens that a woman has a problem I can’t handle myself, I usually call another TBA to help me and if we both can’t manage the situation we tell her to go to the dispensary” (TBA3).

“…If have a case I cannot solve then I send the patient to another fellow traditional healer or if I have many patient then I send others to another
member of the association and they do the same” (TBA4).

“It happens sometimes a woman come to me with more serious problems like when she is in labour and the baby is in breech position, in cases like that I just tell her to go to the hospital instead” (TBA1).

“I call for help from other TBAs or a nurse from the health facility and tell her that I have a certain situation what should I do. And if it happens I can’t reach for other help I just to do it myself” (TBA2).

“For example if the baby come legs first and she has twisted herself with the umbilical cord, we can’t help that woman we tell her to go to the hospital because there they will operate her” (TBA5).

Some TBAs acknowledged that there were cases they could not handle and needed the help of Skilled Care Providers. The tendency of seeking help from Skilled Care providers shows the TBA’s trust in the proficiency of Skilled Healthcare and that they do not enforce their way when facing a complicated case. However, the major shortcoming of the TBA’s referral process was that, it caused the increased delay in reaching emergency obstetric care. The pregnant women’s need for timely quality skilled maternal care services during complications is vital and indispensable. Their delay in seeking skilled care as last resort could be fatal. Hence, the focus should still be on improving the state of health facilities and quality healthcare, also on rising pregnant women’s awareness on the essence of timely access to appropriate obstetric care.
CHAPTER SIX: MATERNAL HEALTH PERCEPTIONS AND HEALTH INFORMATION ACCESS

6.1. Introduction

Access to maternal health information in this context refers to how pregnant women seek and find the needed health information during pregnancy, childbirth and postnatal. It also includes the availability and reliability of the maternal health information sources in the area. It was found that majority of pregnant women in the study population are barely offered any maternal health information when visiting ANC clinic.

The following themes and sub-themes emerged under ‘Maternal Health Perceptions and Health information Access category’: cues to action and health information; perceived barriers to maternal health information, pregnant women’s satisfaction with the offered health information (Figure 6.1).

Figure 6.1: Pregnant Women's Access to Maternal Health Information
6.2. **Cues to Action and Health Information**

The study examined what and how pregnant women in the study population learnt about maternal health issues e.g. when to start antenatal (ANC) clinic, how to detect pregnancy danger signs and labour signs to instigate their healthcare seeking behaviour. The major sources of women’s maternal health information were their Mothers-in-law and TBAs, very few women reported to use the skilled healthcare providers as their source of health information. For instance when asked how they learned about pregnancy danger signs, only 33% (n=4) of the pregnant women who were aware of danger signs reported to learn it from skilled care providers (Figure 6.2).

![Figure 6.2: Sources of Maternal health Information on Danger Signs](image-url)
6.2.1. Mothers-In-Law

The community in the study population was a very traditional society with men and women having distinct roles and responsibilities. The household chores, children care and pregnancy health was solely a woman’s responsibility. Therefore, when a pregnant woman had any concern about pregnancy she would usually go to the Mother-in-law or TBA for advice. Most women reported mother-in-law, and TBAs to be their primary source of maternal health information.

The Mothers-in-law played a major role in maternal health especially in young families, they were responsible for all decisions pertaining woman’s health. They decided when a pregnant woman should start attending ANC clinic, where to go if any problem arises during pregnancy or where to go for childbirth services. As the key decision maker, most pregnant women normally sought maternal health advice and information from them. The following women stated:

“I didn’t start attending ANC clinic earlier because my Mother-in-law said I should wait until the pregnancy is six months old. It is my first pregnancy I didn’t know when to start so I asked her” (IEs Kihamba).

“It is my first pregnancy so I asked my Mother-in-law when I should start ANC and she told me to wait until the pregnancy is six months or more, so I’m waiting” (IMa Kibiriti).

“Last month I had severe stomach pains the whole night, when I told my husband and Mother-in-law, the Mother-in-law said stomach pains are normal for pregnant women I should lie down the pain will stop itself. I didn’t go to the hospital” (IPa Kihamba).

“When my pregnancy was three months I started bleeding when I told my Mother-in-law, she took me to the TBA. The TBA gave me some traditional medicines and it stopped a month later” (IMe Kolongo).
The women’s statements shows that the pregnant women were only acting in response to the information they were given. Hence, it is plausible that the pregnant women’s current healthcare seeking behaviour is the outcome of the health advice and information they received from their Mothers-in-law. It can also be argued that the Mothers-in-law were also acting upon the information they have about maternal health, the information which they could have been obtained from their past experiences or passed on by their Mothers-in-law as well.

6.2.2. Traditional Birth Attendants

TBAs were highly respected and trusted members of the society and their services remained widely used by pregnant women in the study population. The pregnant women identified Traditional Birth Attendants as one of the primary source of maternal health information and maternal care services. As care providers, the pregnant women regarded them as experienced and knowledgeable about maternal health issues hence whenever they wanted to learn anything about pregnancy they asked the TBA in the area.

“My mother-in-law is a TBA she told me about some of the danger signs. She said if I start bleeding or have severe stomach pains when I’m pregnant that means something is wrong with the pregnancy I should tell her immediately“ (IPen Kolongo).

“I once had stomach pains and went to the TBA, she said it is not something to worry about she massaged my stomach and the pain stopped. But she told me that if I bleed that is a problem I should go to the dispensary” (Ian Makulu).
“The TBA does not live far from her so if I have any problem or I want to know anything about pregnancy I just go to ask her and she takes care of it. Last month I had some stomach pains and I told her, she massaged me and gave me some traditional drugs, it stopped after few days” (ISt Kihamba).

The findings show that, the common offered health information by the TBAs was on pregnancy danger signs. Also only bleeding during pregnancy was perceived as dangerous but not other signs e.g. severe stomach pains. This affects pregnant women’s health decisions and healthcare seeking behaviour.

However, it was apparent that the TBAs play a significant role in pregnant women’s health and the women sought and trusted TBAs as their source of maternal health information. The researcher argues that despite the shortcomings on the information inaccuracy, TBA service usage is inevitable and they still play a major role in pregnant women’s health. Hence, there is a need for TBAs inclusion when planning health campaigns.

6.3. Perceptions Towards Skilled Maternal Health Information

6.3.1. Perceived Barriers

Non-provision of Maternal Health Information
The pregnant women reported TBAs and Mother-in-law as their primary sources of maternal health information. However, because there were health facilities in the study population that offers maternal healthcare services, the researcher wanted to know if the women also sought maternal health advice/information from the skilled care providers or if they were offered the health information when they went for ANC visits. Majority of women reported not to be offered any maternal health information or health education at the health facilities.
“No, they don’t offer us any health information at the dispensary. Sometimes when we go for ANC clinic we are even told to go back home because they are tired and we should go again the following day” (FG1 Vic).

“No, I don’t know what the pregnancy danger sign are, this is my first pregnancy. I was not taught about it at the hospital when I went for ANC, actually they don’t give us any health advice or education about pregnancy” (Ima Kibiriti).

“No, they don’t tell us anything. When we get there the nurse just check our weight and blood pressure and fill the ANC card then she tell us to go home” (FG2 Po).

“At the clinic they do not offer any health information or advice about pregnancy. They never told me about pregnancy danger signs or when I should start attending ANC clinic, everyone here in the village start ANC on her own time” (ILu Kihamba).

Nonetheless, even the women who had potential risk of developing pregnancy complications e.g. first time mothers and multipara women were not offered maternal health information during the ANC visits despite being in the risk of developing obstetric complications. The following women reported:

“I don’t remember being given any health information at the clinic. Even in previous pregnancies they never taught me anything about maternal health. If I want to know anything I usually ask my mother-in-law” (ISt Kihamba).

“I don’t know about other women but personally I have never been given any health education about maternal health at the ANC clinic even in the previous pregnancies. They usually don’t offer us health education about pregnancy care” (ISa Kolongo).
The provision of maternal health information during pregnancy is a compulsory and an important element of ANC for every pregnant woman (Lincetto et al, 2006). The basic maternal health information includes health information on nutrition and diet, family planning, pregnancy danger signs, breastfeeding and labour and childbirth (WHO & UNICEF, 2003; Lincetto et al, 2006). Hence, non-provision of health information to pregnant women limits their ability to manage pregnancy danger signs and up-keeping their health during pregnancy, childbirth and postnatal. The researcher interviewed healthcare provider to ascertain the current state and quality of skilled maternal health provision at the health facilities. Figure 6.3 shows the current proportion of maternal health information provision among pregnant women.

![Maternal Health Information Provision](image)

**Figure 6.3: Skilled Maternal Health Information Provision at Health Facilities**

During interviews, the healthcare providers were asked if they offer any maternal health information or education to pregnant women during ANC visits and if yes, what was the content and frequency of the health information offered. The healthcare providers reported that they normally offer health information to pregnant women but due to the large number of patients they had to attend, they sometimes lack time to give the required maternal health education to pregnant women.
“We try to provide health education every time they come for ANC clinic. However, there are days when I’m alone and there are too many patients I find it hard to get time to provide women the required health information. But when they come in the next visits we try to teach them” (NurseM2).

“In days where we have children clinic, maternal clinic and other patients, it is impossible to offer any health education to pregnant women. Sometimes I even forget to check their blood pressure, but we try our best” (NurseB1).

“We try our best to offer maternal health information to pregnant women every time they come for ANC visit, but in sometimes we have too many patients at the dispensary and we don’t get time to talk to pregnant women” (NurseB2).

Moreover, the healthcare providers also reported that majority of women in the population have low literacy thus needed individual attention when offering maternal health education for them to well understand the provided health information. However, due to acute shortage of health staff it was impossible to meet the individual needs of these women.

“The maternal health information we provide helps the women to some extent but still there are challenges. As you know most of the women are uneducated and some do not even understand Swahili and because of the health staff shortage we cannot get time to sit with everyone individually” (Clinical Officer).

“We offer them health education when they come for ANC visit but some days I’m alone and when there are so many patients I can’t get time to talk to each woman in person. The women here real need health education on maternal health but unfortunately we can’t offer enough education due to shortage” (NurseM1).
It was evident that, the rural women could not access the health information from skilled healthcare providers. The researcher argues that maternal health information and health education to pregnant women during pregnancy is vital for improved healthcare seeking behaviour. Proper maternal health information influences how pregnant women react towards ill health and help them in monitoring their health during pregnancy. However, majority of pregnant women were not offered maternal health information during ANC visits and even those who were given health information did not receive adequate amount of maternal health information to influence their health behaviours. The chart 6.4 shows the contents of the maternal health information that was offered to pregnant women at the health facilities.

The lack of maternal health information from skilled healthcare providers could also partly explain why most rural pregnant women still preferred TBAs and mother-in-law as their primary source of maternal health information. When asked, how they feel about the quality of maternal health information provided at the health facilities, most women showed dissatisfaction with the current state health information provision.
Dissatisfaction with the Health Information Provision

Pregnant women’s dissatisfaction with the provided health information referred to negative feelings pregnant women had about the given maternal health information at the Health Facility. The lack of maternal health information at the health facilities led to the majority of pregnant women to have negative attitude toward the quality of maternal health information provided during ANC visits. Most women felt ignored and the healthcare provider couldn’t care less whether or not they knew anything about pregnancy health. Following are some of the responses from pregnant women expressing their opinion on quality of maternal health information offered:

“…when we go there they don’t tell us anything. Once I get there a nurse just take the card and tell me to lie down, she examine my stomach, fill the card then she tells me to go” (IEs Kibiriti).

“I’m not satisfied, they don’t give us any health information. When I get there the nurse tells me to stand on the weighing scale then she give me malaria and Tetanus injections, that’s it then I leave” (IBE Chang’ombe).

“No, we are not given any health education at the dispensary. All they do is checking pressure and weight and give us vitamins and Tetanus injection. They do not even advise us on how to take care of the pregnancy. I am not satisfied” (FG1 So).

“They don’t examine our pregnancy there, I wish when I go to the dispensary and tell them that I have a certain problem, they should at least examine me, tell me what is wrong, and give me an advice what to do. I once had a miscarriage a week after attending ANC clinic” (FG2 Ev).

It was apparent that pregnant women had very limited choices for skilled maternal health information and that they were very unlikely to access it even if they asked from healthcare providers. The researcher argue that the inability to approach and
access the health information from healthcare providers resulted to dissatisfaction among pregnant women leading to majority of women relying and searching for health information from other sources e.g. TBAs, Mother-in-laws and fellow women. However, their knowledge and the health information they passed on depended on past experiences and personal opinion about skilled maternal services hence affecting pregnant women’s knowledge on maternal health and their healthcare seeking behaviour. Nevertheless, the healthcare providers still need to play a leading role in maternal health information provision if these women are to have proper and adequate maternal health knowledge to influence healthcare seeking behaviour.

6.3.2. Pregnant Women’s Awareness on ANC

It was found that majority of the pregnant women were not aware of the recommended time in pregnancy to start attending antenatal care clinic and the significance of ANC. Early ANC attendance was not emphasized by the skilled care providers since many pregnant women reported not to be given that information at the clinic even in previous pregnancies. Figure 6.6 shows the current state of ANC awareness on ANC attending time.

![ANC Awareness Chart](image)

*Figure 6.6: Antenatal Care Awareness*
The researcher argues that pregnant women’s awareness on the recommended time during pregnancy to start attending antenatal clinic (ANC) is a key step towards effective ANC adherence and timely healthcare usage during childbirth. Unless pregnant women are aware of the recommended ANC start time they are very unlikely to start ANC on time. The following are some of the pregnant women’s responses on the question whether or not they are aware of the recommended time to start ANC start and when they plan on starting the clinic.

“No, I don’t know the nurse didn’t tell me when I went to the ANC clinic. But I plan to start next month my pregnancy will be five months old”. (ISp Kolongo)

“I’m not sure when exactly we are supposed to start ANC because I was never told before. But I had a complication about two months ago and I went to the dispensary for check-up, the nurse registered me for ANC too”. (IPa Kihamba)

“No, I don’t know, the nurses do not tell us about those things when we go for antenatal care services, each woman decide on herself when to start ANC clinic”. (FG3 Roz)

“No, I don’t know and I have not yet started antenatal clinic in this pregnancy. But even in my previous I don’t remember being told about it”. (ITa Kolongo)

Normally a pregnant woman learns about antenatal care and maternal health when they start the ANC clinic. As for when to start ANC clinic the women are told about that when they go for pregnancy tests or through other sources e.g. media, brochures, magazines or medical websites. However, due to low literacy and limited connectivity these other media were not the option and testing or confirming pregnancy at the health facility was not the community’s tradition either. The women used their mothers and mothers-in-law’s knowledge about pregnancy signs to confirm their
pregnancies. Hence, most of the first time mothers became aware of ANC attendance via mothers, Mother in law and/or other older women from the community. The major setback of these sources of health information is that it is dependent on individual’s maternal health literacy levels and attitudes toward ANC. The lack of awareness on the recommended antenatal care attendance led to majority of the women to perceive that ANC is not necessary during pregnancy hence started ANC late than recommended. Most women started ANC clinic when the pregnancy was five months or older which caused majority of pregnant women not to meet the minimum required number of four ANC visits during pregnancy.

6.3.3. Perceived Susceptibility Pregnancy Danger Signs

Pregnancy danger signs refer to life threatening conditions that occur to pregnant women during pregnancy, it includes severe headache, anaemia, severe abdominal pains, blurred vision, vaginal bleeding, unmoving baby and high blood pressure. Delayed management of pregnancy complications caused by late seeking or delayed access to emergency obstetric care is one of the major contributing factors to the existing high maternal deaths that occurs in Tanzania today and developing countries today (Chou et al, 2012; Singh et al, 2009; UN Millennium Project, 2005; WHO, 2004). One of the aims of antenatal care is to equip pregnant women with essential skills on how to detect and manage the pregnancy danger signs (Lincetto et al, 2006). The researcher argue that pregnant women’s awareness on pregnancy danger signs is fundamental if women are expected to seek emergency obstetric care early and achieve the desired positive outcomes. The pregnant women’s clear understanding of the pregnancy danger signs helps women to detect and manage the danger signs at early stages before any harm is caused to a mother and/or the unborn baby. Figure 6.7 shows the current pregnant women’s awareness on pregnancy danger signs.
To assess women’s awareness of pregnancy danger signs, the researcher asked women if they could identify at least four pregnancy danger signs and the required reaction once they experience any. It also included women’s perceptions of the referral procedure to the higher health facility. The pregnant women with high risk pregnancy are normally referred to a higher health facility for delivery before the labour as they are more likely to develop some complications. Hence, women’s compliance to referrals reflected their understanding on severity of pregnancy danger signs and essence of timely obstetric care.

It was found that most of pregnant women were not aware of the pregnancy danger signs and had very little knowledge on how to manage the danger signs or complications when they arise. The majority of women in this group were first time mothers and although some had already attended the ANC clinic more than once, they were still not aware of any pregnancy danger signs.

“*No, I don’t know any pregnancy danger sign, this is my first pregnancy. I was not taught about danger signs at the hospital, actually they don’t offer us any health information about pregnancy.*” (IEst Kibiriti)
“No, I’m not aware of any pregnancy danger sign, the nurse didn’t tell me when I went for antenatal care clinic at the hospital. Normally they don’t offer us any kind of health information on pregnancy there”. (IKu Makulu)

“No, I don’t know what a pregnancy danger sign is. I have not started attending antenatal care clinic yet, may be they will tell me when I go for antenatal care”. (IMa Kibiriti)

“No, I’m not aware of that, my Mother-in-law never told me but also at the clinic they don’t tell us much about pregnancy. But when I have any problem I usually go to the TBA”. (ILu Kihamba)

For improved maternal care utilization behaviour it is vital that the rural women are offered adequate maternal health information about pregnancy and danger signs (Anyia et al, 2008; Nikiema et al, 2009). The knowledge of pregnancy danger signs determined their perceptions towards the threat posed by danger signs and how they responded to the respective problems.

6.3.4. Perceived Severity of Danger Signs

The lack of reliable source of maternal health information on pregnancy danger signs affected how pregnant women in the study population perceived the severity of pregnancy related danger signs. This resulted to most of pregnant women to perceive pregnancy danger signs as harmless. Responding to the question ‘What is their opinion on the severity and threat posed by pregnancy danger signs’. The following women stated:

“No. I don’t think they have any effect on me or my unborn baby because whenever I have stomach pains I just rest for a while then I feel ok. It is common to pregnant women, it happens to me all the time”. (IPol Kihamba)
“May be bleeding during pregnancy is dangerous but other issues I think are normal in pregnancy. I had vaginal discharge few months ago and I used a traditional medicine it stopped”. (FG3 Pen)

“I'm not sure but I think they can not cause any serious harm to me or my baby if I rest. I remember once or twice I had blurred vision when I was in the farm and I lied down for a while then I felt ok”. (FG3 Vic)

“No, I don’t think they can cause any serious problem to me or my baby. My mother in law told me that stomach pains and vaginal discharge are common to most pregnant women is shouldn’t worry”. (IHap Kibiriti)

“Currently I have vaginal discharge but I have done nothing yet, I told my Mother-in-law about it and she said it’s normal for pregnant women after a while it will stop itself”. (IMe Kolongo)

The provision of health education about pregnancy danger signs is key if pregnant women are to access emergency care on time and prevent maternal deaths due to obstetric complications. The perceptions of these women towards the severity of pregnancy danger signs showed that their knowledge of danger signs and maternal health is still very low.

The researcher argue that unless these women understand the real danger and effects of pregnancy related danger signs, they are less likely to timely seek and utilize the required skilled maternal care. If the women perceive the pregnancy related danger signs to be harmless to them or their baby they are less likely to seek the required skilled healthcare on time.
Alternatively, the effect of low knowledge about maternal health and pregnancy danger signs was non-compliance to referrals. Similar, to the findings in another study (Urassa et al, 2005) in rural Tanzania, most of the women did not show up to the referred Health Facilities. Women perceived referral to the Health Centre as healthcare provider’s exaggeration of minor pregnancy problems and they could just use other options. Also, the lack of reliable transport contributed to the non-compliance of referrals. Unreliability of ambulance and poor living conditions caused most referred women resorting to TBAs due to the high cost of hired transport.

“At the dispensary nowadays even if you have a minor problem they do operations, that’s why some women when referred do not go to the Health Centre for childbirth”. (FG4 Bea)

“Many pregnant women who are referred to the Health Centre are mostly those who the nurse think they cannot have normal delivery so they need to be operated but when they go to the TBA they just give birth without any problem”. (FG3 Ela)

“The health centre is 5km away from here and there is no reliable public transport unless we hire a motorcycle which is unaffordable to some of us that’s why others choose to go to the TBA instead”. (FG3 Sal)

“This is my seventh pregnancy and the nurse has referred me to the Health Centre for delivery. I will see what happens, if the labour start in the day I may go there but if at night I will just call the TBA”. (FG4 An)
The pregnant women’s non-compliance to referrals and fear of caesarean sections were seconded by the nurses from both dispensaries. The following nurses stated:

“Others are afraid of caesarean section, they think because they are told to go to the health centre for delivery they will be operated so they decide to go to TBAs instead”. (NurseM2)

“Other women think that because they have been referred to the health centre, they will be operated and as a result they will spend several days in the hospital. Because some of them don’t have a person to leave the other children with, they deliberately delay going to the hospital and then call the TBA to assist them”. (NurseB1)

It is plausible that the women’s perceived low risk of pregnancy danger signs and complication was due to lack of adequate health information on pregnancy and danger signs. The lack of maternal health information and education at the ANC clinic caused most of these women to undermine the importance of ANC and the risks of pregnancy related danger signs leading to under or non-utilization of skilled services. The pregnant women were acting on the health information they have received from other women about pregnancy danger signs and referrals. It could be argued that if women were given sufficient information about danger signs (Kabakyenga et al, 2011) and explained why they are referred to the higher health facility they would comply to referrals and seek emergency obstetric care whenever the complication arises.

Maternal health information package includes information on how to prepare for childbirth e.g. how to detect labour signs, emergency money, and transport arrangements to the health facility. The maternal health knowledge would also change their perceptions on the need of skilled care and the risks of using non-skilled healthcare services. Therefore, even though the advanced health facilities are far from home a woman with the help of family would still make it to the health facility in time.
6.4. **Pregnant Women’s Healthcare Seeking Behaviour**

Maternal healthcare seeking and utilization refers to how pregnant women upkeep their pregnancy health and how they respond to ill-health or pregnancy related complication when arises during pregnancy, childbirth or postnatal. It includes antenatal care usage, choices on point of care during ill-health and place of childbirth during labour. The recommended maternal health information package to pregnant women includes health information on nutrition and diet, family planning, pregnancy danger signs, labour and childbirth, breastfeeding and antenatal care (WHO & UNICEF, 2003; Lincetto et al, 2006). Hence, the lack of access to quality maternal health information resulted to the pregnant women in the study population to have very little knowledge and awareness about maternal health. Majority of pregnant women were not aware of when they are required to start ANC clinic, the importance of skilled attendance at birth nor the labour or pregnancy danger signs.

### 6.4.1. Perceived Benefits of Antenatal Care

Early start of ANC clinic increases the likelihood of a pregnant woman to meet the required minimum number of antenatal care visits and hence receive all essential check-ups and immunisations. It is recommended that to achieve a full life saving potential of antenatal care, a pregnant woman need to attend at least four ANC visits throughout the course of pregnancy (Chou et al, 2012). Regular antenatal check-ups are essential for early diagnosis, prevention and treatment of obstetric complications. Hence, the delay in starting ANC may lead to missed opportunities to identify and manage conditions that might threatens mother and child’s health (Gage, 2007).
Figure 6.8: Pregnant Women’s ANC Attendance

Most of pregnant women (Figure 6.8) started attending ANC late than recommended. These findings are similar to studies done in Kenya (mwanki et al, 2002), Zambia (Sialubanje et al, 2014) and South Africa (Myer and Harrison, 2003). This could be due to lack of awareness on the recommended time to start attending ANC and the benefits of ANC during pregnancy. Majority started attending ANC when the pregnancy was five months or older.

“I have not started antenal clinic yet, I will go next month (fifth month pregnancy). I heard other women say that the best time to start ANC is when the pregnancy is at least six months old”. (IEst Kibiriti)

“I went to the ANC clinic when I was five months pregnant. I was waiting for the pregnancy grow a bit more because if I start early I will have to make more visits to the clinic”. (ISal Kolongo)

“I’m six months pregnant but I have not started antenal clinic. May be I will start next month, I think I can start any time the important thing is to go there at least once for ANC the clinic card otherwise they will not accept me when I go for childbirth”. (FG1 Sof)
“I didn’t start attending ANC clinic on time because my Mother-in-law said it is too early I should wait until the pregnancy is six months old”. (ISak Chang’ombe)

“They didn’t tell me when to start ANC in my previous pregnancy, so I guess I can start any time. Now I’m six months old so next month I will start ANC. In the last pregnancy I started when the pregnancy was five months old the nurse didn’t say anything”. (IEve Kihamba)

The women’s statements were confirmed by nurses at the health facilities where the pregnant women attended ANC clinic. The following nurses stated when responding to the question on what they thought caused most women to delay starting ANC clinic.

“The problem is on starting ANC clinic, most women start late, they wait until the pregnancy is five months or older, others start on the seven month. They tell each other that it is better to wait to avoid having many repeating visits”. (NurseB1)

“There are some who come late due to farming activities, or the spouse is not around but some are avoiding to start early because they have been told by other women they should delay until the pregnancy shows”. (NurseM1)

“There is no significant difference, but most of the first time mothers come earlier (between 16-20 weeks) than multi-parous women whom majority start ANC when they are seven months or more. But that’s only when they have not been told by their mothers-in-law or other older women that they only need to make few prenatal visits to the dispensary”. (Clinical Officer)

It was apparent that the pregnant women’s delay in starting ANC clinic was the result of the health information they received from their Mother-in-laws and some by the TBAs. Nonetheless, the skilled healthcare provider acknowledged the existence and
effect of other sources of maternal health information in pregnant women’s ANC seeking behaviour. The lack of counter information from skilled healthcare providers caused the women to act on the information they had, hence persistent delays in ANC. The researcher argue that, unless these women are given the proper information about ANC and the importance of having regular check-ups they cannot be expected to behave differently. Healthcare providers need to provide more health education on ANC and its advantage to these women.

6.4.2. Perceived Need for ANC and Skilled Healthcare Services

Lack of adequate health information on maternal health affected women’s perception on the need for ANC and obstetric care. The major reason why pregnant women sought ANC was to acquire prenatal card which insured their access to skilled care in case they needed it during childbirth.

“Most of us go to the clinic just to acquire the prenatal card because if I don’t have the clinic card the nurse will not accept me when I go for childbirth. Otherwise I don’t think I need to go to the dispensary if my pregnancy has no problem”. (FG2 Ste)

“I'm six months pregnant but I have not started antenatal clinic. I may start next month, I think I can start any time the important thing is to go there at least once for the prenatal card otherwise they will not accept me when I go for childbirth”. (IBea Kibiriti)

Maternal healthcare was not perceived as a compulsory care by majority of pregnant women. The ANC during pregnancy was perceived as optional and they would only seek it when it was convenient even if it was in the last trimester or the pregnancy. While some of the women reported to deliberately delay starting ANC clinic to avoid having many repeating visits to the dispensary others reported to lack time due to farming activities.
“I’m six months pregnant but I have not started antenatal clinic. I may start next month, you know we get tired of walking to the clinic every month but if I start late I will only need to go there fewer times”. (IPen Kolongo)

“I went to the clinic when I was five months pregnant. I was waiting for the pregnancy grow a bit more, if I start early I will have to go to the clinic many times. I get tired of walking to the clinic every month”. (IPol Kihamba)

“I started ANC clinic when the pregnancy was six months old. It is a farming season now, I spend most of the time in the farm. We usually go in the morning and return in the evening”. (IAn Makulu)

“It is a farming season now, I usually go to the farm from morning to late afternoon so I can’t find time to go to the ANC clinic. But I will try to go next month”. (ISof Kolongo)

The above pregnant women’s statements were confirmed by nurses at the health facilities where the pregnant women attended antenatal care clinic.

“There are some who come late due to farming activities, or the spouse is not around but some are avoiding to start early because they will be required to come many times for repeating visits”. (NursesM1)

“… most of the first time mothers come earlier (between 16-20 weeks) than multi-parous women whom majority start ANC when they are seven months or more. But that only when they have not been told by other older women that if they start early they will have to make more antenatal visits to the dispensary”. (Clinical Officer)
Furthermore, the effect of lack of adequate maternal health information was also reflected on men’s perceptions about pregnancy and ANC. Since, pregnancy was a woman’s issue, men in the community did not concern themselves about maternal health. Some men even run away or travel on purpose once they become aware that their wives are pregnant and return soon after delivery. Most men lacked awareness on the importance of ANC and skilled attendance at birth. This resulted to pregnant women lacking support from their spouses during pregnancy. Some women reported to delay starting ANC because their spouse refused to accompany them to the clinic.

“I didn’t start early because my husband was refusing to accompany me. When I was five months pregnant I told my husband to go the clinic, he said we will go the following month. Then he travelled, but when he come back we will go”. (IEst Kibiriti)

“I started antenatal clinic late because my husband was not around, at the clinic they want us to be together in the first ANC. He came back when the pregnancy was five months and we went together to the clinic”. (IMar Kibiriti)

“My husband was refusing to go with me to the clinic, it took time for me to convince him to accompany me. Many women here have not yet started ANC because of that (nurses requiring both man & wife to be there). Most men are afraid of HIV testing, some even give nurses some money (bribe) so she accepts a pregnant without the spouse”. (ISal Kolongo)

The thoughts expressed in above statements were reiterated by the nurses from the health facility when responding to the question on what they think causes majority of pregnant women to delay starting antenatal clinic. The nurses from the two health facilities reported the following:

“...The delay is also caused by partners, most of them are not ready to accompany their wives to the clinic. Some have no any reason not to accompany their wives but fear of HIV testing”. (NurseM2)

“Men also contributes to pregnant women’s delay in attending ANC clinic. Some men travel on purpose while others just refuse to accompany their wives
to the ANC clinic, it is one of the major challenges we are facing here”.
(NurseB1)

6.4.3. Social Norms

Nonetheless, majority perceived the pregnancy related danger signs to be harmless to
them or their baby and the skilled healthcare was only for the women with problems.
Several women reported not to seek and kind of care when spotted a danger sign and
when the pains persisted they preferred TBA as their first point of care instead of the
health facility. Very few women reported to go straight to the hospital immediately
when feeling unwell.

“Whenever I have stomach pains I just go to the TBA, usually she massage my
stomach and if the baby is in bad position she reposition the baby until I feel
better”. (ISte Kihamba)

“Yes I once had a problem, in my last pregnancy in the fifth month I started
bleeding and I went to the TBA. The TBA gave me some traditional drugs to
use after few days it stopped”. (ISph Kolongo)

“Yes, my mother in law is a TBA so whenever I have any minor problem I just
tell her and she takes care of it. Last month I had vaginal discharge and I told
her, she gave me some traditional drugs, it stopped after few days”. (IPen
Kolongo)

The pregnant women’s preference of TBAs services as the first point of care was
confirmed by the TBAs themselves. The following TBAs stated:

“The fact is, even though majority of women nowadays are going to the
dispensary for childbirth they still like and trust my services. Most of them
come to me first whenever they have any problem. For example when in
labour the women come to me so I check if it is a real labour before going to
the hospital”. (TBA2)
“Many women once they are told that they should go to the Health Centre for delivery they come to me for advice and medicines before going to the health facility. When a woman come I examine her and ask how many children she has, if she had many children I just tell her to go the hospital because most of them bleeds a lot after delivery making their childbirth very risky”. (TBA4)

The pregnant women’s choice of the first point of care when experiencing a pregnancy related health problem is critical for positive outcome of the respective obstetric complication. Regardless of the woman’s location urban or rural, the slight delay in seeking and accessing appropriate healthcare could be fatal hence it is important that these women are given more health information on maternal health and associated risks of delayed emergency care.

6.5. **Maternal Health Information Needs and Preferences**

One of the study objectives was to identify maternal health information needs of pregnant women in rural areas. The study focus was on understanding maternal health information preferences; what pregnant women wanted to know about maternal health; the preferred media of communication and; the preferred frequency of receiving the respective health information.

The researcher used the findings from interviews with pregnant women which revealed the lack of maternal health information at the health facilities to ascertain the pregnant women’s health information needs. During focus group discussions, pregnant women were asked to identify the type of maternal health information they needed to be offered at the health facility or through other media. The main theme was ‘Health Information Needs’ with sub-themes: Type of health information and; Preferred media of communication (Figure 6.9)
### Table 6.1: Pregnant Women Information Needs

<table>
<thead>
<tr>
<th>S/N</th>
<th>Younger Pregnant Women (18-25 yrs)</th>
<th>Older Pregnant Women (&gt;25 yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pregnancy Danger Signs</td>
<td>Family Planning</td>
</tr>
<tr>
<td>2</td>
<td>Labour and Childbirth</td>
<td>Childcare</td>
</tr>
<tr>
<td>3</td>
<td>Pregnancy care</td>
<td>Miscarriage Prevention</td>
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<tr>
<td>4</td>
<td>Family Planning</td>
<td>Danger signs</td>
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<tr>
<td>5</td>
<td>Childbirth preparation</td>
<td>Nutrition and diet</td>
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<tr>
<td>6</td>
<td>Nutrition and diet</td>
<td>Labour and childbirth</td>
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<tr>
<td>7</td>
<td>Antenatal care</td>
<td>Childbirth preparation</td>
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#### 6.5.1. Maternal Health Information Needs

Pregnant women were asked what kind of health information they would like to be given by the care providers during ANC visits. The results showed some variation in maternal health information preferences between younger women and older ones (Figure 6.10). For example, younger women wanted information about pregnancy, danger signs and labour and childbirth, while older women preferred information on family planning and childcare. Following are responses from younger pregnant women aged 18-25:

“I wish they could teach us everything about pregnancy and issues related to it, for example you asked about pregnancy danger signs, I don’t know any of them”. (FG3 Mer)

“I want to be taught about pregnancy health in general, what to do before and after childbirth as well as how to prepare for childbirth”. (FG3 Est)

“I am very nervous about giving birth, I wish when I go to the ANC clinic the nurse could talk to me about labour and childbirth like what happens during childbirth and how to prepare for childbirth”. (FG3 Mar)
“I wish they could teach us about pregnancy danger signs, how to detect it and what we should do when we experience any of the signs. For example, I this is my first pregnancy and the nurse has never told me anything”. (FG3 Pau)

Older pregnant women were more interested on health information about family planning, miscarriage and childcare. This could be due to the fact that majority have already had several children and they were thinking of stopping having more children. The following women responded:

“I wish they could teach us about family planning and the side effects of birth controls. We heard people say that birth control pills causes infertility that’s why some of us do not use them”. (FG4 Mag)

“They should teach us of how to detect danger signs and how take care of our pregnancies because pregnancies can have many problems”. (FG4 Sof)

“I wish when I go there they could tell me about my pregnancy progress if it’s doing fine or not. In the last pregnancy I had miscarriage one week after I attended the ANC clinic, may be if they told me something was wrong with my pregnancy I wouldn’t have lost my baby”. (FG4 An)

The variation in health information needs between age groups show the need for tailoring the information for different people at different times to meet the information needs of expecting mothers. Furthermore because of their status, most young mothers tended to be more dependent on mothers-in-law for health information who also may not be well informed or rely only on TBAs.

6.5.2. Preferred Media of Communication

For the health information to produce the desired outcomes, it has to be communicated in a way that is could be easily understandable without a recipient needing further information to clarify it (Sørensen et al, 2012;The Internet Health Care Consultants, 1999) but also through a media that could be easily accessed by the intended user. Pregnant women living in rural areas are disadvantaged in terms of
information media access. Majority are illiterates and lives in poverty but with limited connectivity and lack of electricity the pregnant women in these areas have very few options for health information media.

To ensure future interventions are effective and the information reach the targeted audience, pregnant women were asked to identify the media of health information that would work in their context and environment.

“We would like the nurses to offer us health advice and health education about maternal health every time we go for ANC clinic”. (FG3 Ela)

“They could also use posters to give us health information on maternal health. When our community leaders want to announce anything, they usually put a poster in a milling machine and everyone who see it tell another person”. (FG3 Sak)

“Usually the village chairman calls for a meeting and deliver the information or if it’s for specific group he comes to our homes. I think if the nurse come into our village meeting once a while it would help”. (FG4 Ves)

The findings have shown that community leaders play an important role in information dissemination. They are trusted by the pregnant women and the general community for delivering any kind of information. The pregnant women’s trust in community leaders could be utilized to increase rural population’s access to health information. However, due to sensitivity of maternal health information, the healthcare providers still need to play a leading role in provision of health information.
6.6. Conclusions

The inadequate conditions of the health facilities and the poor working conditions of the care providers affected the provision of quality of maternal services and health information to pregnant women in the study area. The limited access to skilled maternal health information from skilled healthcare providers and lack of alternative sources of reliable health information led pregnant women to seek health information from their Mothers-in-laws, TBAs and other women in the society. Furthermore, findings indicated that mothers-in-law played a major role in the pregnant women’s lives and that she was responsible for women’s maternal health. Thus, as a key decision maker and experienced mother, most pregnant women sought and obeyed the maternal health information and advice received from them.

However, there was a shortcoming of information inaccuracy as their health advice was not based on previous expert advice but rather on the personal opinion and attitude towards skilled maternal services. The decision whether to go to the health facility for medical help or not, or to start attending the ANC, largely depended on the mother-in-law’s opinion on the young mother’s health condition and their health literacy. This poses a major risk for these women’s health outcomes particularly in cases where mother-in-law believes in the efficacy of the TBAs rather than skilled maternal services.

Lack of proper health information on maternal health caused majority of women start attending ANC late and delay in seeking obstetric care during labour or when experienced a pregnancy danger sign. The majority reported not to seek and kind of care when experienced a health problem, some reported to go to the TBAs and very few reported to go straight to the hospital immediately when feeling unwell. The plausible explanation for women’s preference over TBA’s services as first point of care could be the poor services and mistreatment they receive at the dispensary when they go there early or when it is a false alarm.

Hence, in order to improve skilled maternal healthcare utilization behaviour there is therefore a need for providing a friendly environment for maternal health services and information access among rural women, especially pregnant women and new mothers.
It is unfortunate that these needs are currently not met despite the fact that these women are running high risk of developing complications.

The researcher argues that despite the existing challenges healthcare providers face, there is still an opportunity to offer rural pregnant women the needed health education and advice to help mothers gain essential knowledge about maternal health. The findings show that almost all pregnant women made at least one ANC visit to health facility during pregnancy. This offers an opportunity to reach out these women with proper maternal health education. It could be achieved by building capacity to other groups in the society e.g. Community Health Workers (CHWs), women groups and TBAs. The Community Health Workers could be used more effectively and the TBAs could be trained and empowered to offer health information and health education to pregnant women and the community at large.

Furthermore, due to the influence of the family and other community members, population wide maternal health campaigns that enable the community as a whole to learn about maternal health issues and the primary care for pregnant women are required.

Thus, for the effective utilization of skilled maternal services and successful reduction in preventable maternal deaths occurring in Tanzania and other developing countries, the poorly served and unreached communities in rural areas must be reached and enabled to seek, access and use maternal health information. Care providers and policy makers should focus on meeting the health information needs of rural populations in order to build a well-informed and knowledgeable society that makes better and well-informed health decisions.
CHAPTER SEVEN: DISCUSSION

7.1. Introduction

The study set out to examine the impact of maternal health information on pregnant women’s healthcare seeking behaviour. The majority of pregnant women in rural areas are poor and less educated. Due to poor living conditions these women run high risks of developing pregnancy related complications. Furthermore, long distances to health facility and lack of reliable of transport increases the risk of maternal deaths whenever a complication arise or delay in seeking obstetric care during labour. Hence it is vitally important these women and the population in general to have adequate health information on how to detect labour and pregnancy signs and the healthcare requirement to manage the complications.

The researcher argues that the women’s health behaviour during pregnancy was a result of the health information they retained about pregnancy and maternal health regardless of its accuracy and/or source of the particular health information. Also, the non-utilization of skilled healthcare did not necessarily imply that rural pregnant women do not seek help at the instance if ill health but rather they do not prefer it as their first option. The decision as to whether or not to seek skilled healthcare or where to go at the event of ill health depends on the pregnant woman’s conceived pre-perceptions and knowledge about maternal health and healthcare. The findings show that the pregnant women’s health information about maternal health came from two compelling sides with slightly different opinions about pregnancy and maternal health: the community members e.g. TBAs, Mothers-in-laws and other women: and the Skilled Healthcare Providers (SHPs).

As a community member, mother and a wife the pregnant woman is expected to adhere to and behave according to social norms and traditions. On the other hand, for baby’s and her survival she is required to effectively adhere to skilled maternal healthcare requirements during pregnancy, childbirth and postnatal. Hence, unless these two sources have a common understanding about maternal health and healthcare requirements, the pregnant women remain caught in the middle without proper information and how she should real act during pregnancy, childbirth or postnatal life.
Traditionally the pregnant women are verbally passed health information about pregnancy and maternal health from their Mothers-in-laws, older women or/and TBAs. The information which largely depends on the existing local knowledge and perceptions of maternal health and the role of skilled healthcare. Alternatively, when she goes to the health facilities for ANC services she is expected to receive proper and adequate health information about maternal health that supports the correct health information received from the community sources as well as rectifying the inaccurate information. The research central argument is that the health information pregnant women received from either source determined their perceptions towards maternal health and the healthcare seeking behaviour.

**7.2. Quality of Maternal Care Services**

The Safe Motherhood Initiative (1987) aimed at reducing illness and deaths related to pregnancy and childbirth (Mahler, 1987). It placed emphasis on skilled attendance at birth and access to quality emergency obstetric care and reproductive healthcare. However, the results were not very reassuring particularly in the developing world. Later on, the Millennium Development Goals (5th goal) were introduced aiming at reducing maternal mortality by three quarters by 2015 the target which majority of developing countries failed to accomplish. The MDGs focused on continuum of care and increasing pregnant women’s access to skilled health services.

The important element of the pregnancy continuum of care is effective Antenatal Care (ANC) (Myer and Harrison, 2003; Birungi et al, 2009). Antenatal care aims at monitoring mother and baby’s health during pregnancy as well as early detection and management of pregnancy related danger signs if any. The recommended ANC package includes intermittent preventive treatment for malaria during pregnancy (IPTp), tetanus toxoid immunisation, identification and management of infections including HIV, syphilis and other sexually transmitted infections (STIs) and identification and management of obstetric complications such as preeclampsia (Lincetto et al, 2006). It also include provision of maternal health information to pregnant women to educate them how to identify and act on danger signs once they arise (Lincetto et al, 2006; Bhattia& Cleland, 1995).
Delay in seeking obstetric care at the event of complication and poor quality of care contributes to the persisting high maternal mortality rates in most developing countries including Tanzania (Chou et al, 2012; Mwaniki et al, 2002; Thaddeus & Maine, 1994). It is estimated that about 75% of maternal deaths could be prevented if pregnant women seek and access obstetric care on time (Chou et al, 2012; Hulton et al, 2000) hence it is vital that the care should be of high quality. However, provision of quality, adequate and timely access to maternal health services is still a major challenge in Tanzania particularly in rural areas. The health facilities are in very poor state with acute shortage of healthcare staff and dire lack of medical supplies and equipment.

7.3. **Perceived Barriers**

The acute shortage of healthcare staff and poor working conditions caused healthcare providers to work under pressure resulting to provision of poor healthcare services to pregnant women attending ANC and childbirth. It is argued that even though the availability of quality healthcare does not guarantee its utilization (Hulton et al, 2000) but the poor quality also hinders pregnant women’s utilization of services (Srivastava et al, 2015; Simkhada et al, 2008; Mathole et al. 2004). Most maternal deaths occurs during labour, childbirth or 24 hours postpartum (Chou et al, 2012; Campbell et al., 2006) hence it is important that all pregnant women have access to quality maternal healthcare. Provision of quality maternal services in rural areas is key for increased utilization because once pregnant women are satisfied with the services they are more likely to change their attitudes towards skilled health services and effectively utilize the services (Srivastava et al, 2015; Fawole et al, 2008; Aldana et al., 2001).

In addition to poor quality of maternal care services, the pregnant women mentioned the indirect charges at the health facilities as one of barriers to their utilization of services. The maternal services are required to be provided free of charge in all health facilities in Tanzania. Hypothetically that was the case in the health facilities at the study population and that was what pregnant women were told. However, it was found that there are informal charges and costs e.g. drugs and supplies costs which
significantly affected women’s access and usage of maternal services given that majority of women were poor. For instance, the referral costs were supposed to be incurred by the health facility but in most cases women were required to pay for the transport costs when referred to another health facility. The pregnant women expressed their concerns with the referral process and that they rather have home delivery or go to the TBA than going to the referred health facility.

Furthermore, similar to findings by (Carpenter, 2010), most women did not adhere to ANC or seek skilled attendance at birth only because they were not fully aware of the essence and benefit of skilled healthcare during both pregnancy and childbirth. Most of them were only aware of the barriers than benefits hence affecting their utilization levels. Perceived barriers which could also been a result of information (via word of mouth) they received from others. Thus, these perceptions could be changed through health education and health info.

Hence, to achieve the full lifesaving potential of obstetric care usage, the health facilities offering the services need to be well equipped to provide the quality maternal care services at minimum inconvenience. The essence of encouraging rural pregnant women to effectively adhere to ANC during pregnancy and skilled attendance at birth is to detect and manage any complication at early stages and increase the likelihood of safe delivery. However, unless the services are of good quality and conveniently accessible by majority the skilled care utilization is likely to remain very low and insignificant. With the current state of the health facilities in the study population, it is debatable to demand the pregnant women in the area to effectively utilize the skilled healthcare services.

7.4. Perceived Susceptibility

Similar to findings from previous studies, perceived susceptibility was not very important in influencing pregnant women’s healthcare seeking behavior (Champion and Skinner, 2008; Carpenter, 2010). It was found that some women had already experienced some complications in the past yet still they delayed starting to attend ANC and chose home delivery. This could be due to social believes and superstitions
where by miscarriage or childbirth is considered a bad luck or due to witchcraft (Idowu, 2013; Erinosho, 2005).

However, in the study population the pregnancy was perceived as just one of the woman’s roles, to bear children for her husband. Being pregnant did not change or shift woman’s responsibilities and duties to her family. The ANC awareness was still very low among both pregnant women and the community in general. The community’s general perception was that Antenatal care (ANC) during pregnancy was optional and it was only for those with problems. Even at the event of ill-health most women preferred TBAs services over skilled healthcare. The pregnant women sought ANC mainly to obtain prenatal card because without the prenatal card they would be rejected at the health facility when they go for childbirth (Amooti & Nuwaha, 2000; Mrisho et al, 2009; Seljeskog, 2006).

Men and spouses in the community secluded themselves from women’s pregnancy and maternal health. Men’s lack of awareness on maternal health led to pregnant women lack the support and care they need during pregnancy (Sialubanje et al, 2014). They left pregnant women’s health issues to women themselves or Mothers-in-law. A pregnant woman would normally continue doing her chores and duties e.g. children care, household chores and farming until she give birth even if it meant to give birth at the farm. Overwork and heavy duty activities put a pregnant woman in risk of miscarriage or premature labour (Kowalewski et.al, 2000). The researcher argues that men’s lack of involvement in women’s health escalated the problem of low maternal health literacy among community members and non-utilization of skilled healthcare. The healthcare providers were the only source of reliable maternal health information but because men refused to accompany their wives to the clinic there were no other way men would learn about maternal health and pregnant women’s healthcare requirements. It is argued that with lack of support from spouses and community members it was very unlikely for a pregnant woman to adhere to ANC appointments. It is conceivable if the women chose to use the free time to rest instead of walking to the health facility for ANC.
Furthermore, Majority of men were not aware of the importance of HIV tests during pregnancy hence many refused to accompany their wives to the clinic in fear of having HIV tests. The Tanzanian health policy demands that in the first visit a pregnant women should be accompanied by her spouse mainly for HIV check-up in order to prevent Mother-to Child HIV transmission. The researcher agrees that the PMTCT policy mean well to protect unborn baby from being infected with HIV. However, in populations where HIV awareness is still very low, particularly in rural areas, it has resulted in maternal healthcare non/under-utilization. Some men ran away or travelled on purpose once they became aware that their wives were pregnant and returned soon after delivery. This has caused women to refrain from seeking maternal care on time in fear of being rejected by care providers at the health facility. Thus, unless the communities become aware of HIV and maternal health problem of delay and skilled care non-utilization would persist in these populations.

Moreover, due to lack of adequate time to rest and attend skilled healthcare it was improbable to seek the skilled health information about maternal health from skilled healthcare provider. Lack of support and limited time to make a trip to the health facility led pregnant women to seek maternal health information from other sources e.g. Mothers-in-laws, TBAs or fellow women they meet at the milling machine or water fetching points (Kowalewski et.al, 2000). However, these alternative sources of health information had shortcoming because their information was based on personal past experiences and attitude towards skilled health services. It can be argued that the Mothers-in-laws and TBAs attitudes was also based on the information passed on from their Mothers-in-law and experiences with maternal health services which was may be before the availability of the health facilities in the community.

It was perceived that, if the older generation survived only with TBA’s assistance without the skilled health services in the community, then the ANC and skilled attendance at birth was optional and it was only for those with problems that could not be handled by TBAs (Jegede, 1998; Kitts and Roberts, 1996; Nwabuaze (2003). The researcher argue that this health information could have been perceived correct by the community because there were safe childbirth but also there were many other maternal deaths which may also have been classified as bad luck by the community.
but they could be prevented if women accessed emergency obstetric care on time. Also because Mothers-in-laws were key decision maker on all matters pertaining pregnancy, it was more likely for pregnant women to act on the health information passed on by their Mother-in-laws. Similarly to TBAs, as the community care providers, it was easier for their health information and advice to be trusted and adhered to by pregnant women. Hence, there is still a need for ensuring pregnant women and the community are offered the adequate information about maternal health and risks of unskilled attendance at birth.

### 7.5. Perceived Severity

The findings show that pregnant women in the study population perceived that most pregnancy danger signs are actually harmless. The knowledge of pregnancy danger signs determined their perceptions towards the threat posed by pregnancy related danger signs and how they responded to the respective danger signs. The researcher argue that it is anomalous to expect a woman who perceive the danger signs harmless to seek obstetric care at the advent of ill health. The lack of awareness caused pregnant women to underestimate the real risks of pregnancy danger signs thus delaying in seeking and/or utilizing the required obstetric care.

Moreover, since skilled healthcare was perceived to be for pregnant with health problems, majority of women did not use health facility as their first point of care. Most women reported not to seek any kind of care at the advent of ill health, they sought care only when the pains or symptoms persisted. The TBAs were the most preferred first point of care by most women. The researcher argue that, the women’s preference of TBAs was a result of the information they received from their mothers-in-law and/or fellow women in the community since it was a common understanding that skilled health care was only for complication that could not be handled by TBAs. This shows the influence of health information pregnant women had about pregnancy and corresponding maternal care during pregnancy and childbirth. Therefore, these women need substitute appropriate health information about maternal health and pregnancy care to be active users of skilled healthcare services and timely seek...
appropriate care whenever needed. All pregnant women particularly young and first
time mothers need to be reached out to and given adequate health education so as to
increase their awareness on antenatal care and achieve the full life saving potential of
antenatal care. Similarly, how pregnant women react when they experience the
pregnancy danger signs depends on whether or not they are aware of what the
pregnancy danger signs are and the risks involved.

The preference of TBA services could also be due to pregnant women’s personal
experiences of poor quality of services received from the healthcare providers at the
health facilities. Women expressed their awareness of the poor quality of equipment
used by TBAs yet they preferred their services. For instance, the TBAs used razors to
increase passage during childbirth, there were no anaesthesia and they never stitched
the wound either. The plausible explanation would be the loving care and attention
offered by TBAs and dissatisfaction with the skilled healthcare providers. Pregnant
women referred TBAs as friendly and caring and the nurses at health facilities as
mean and impolite. However, these women run high risk of infections (sepsis) due to
the usage of unhygienic environment and unsterile equipment. Also because the TBAs
do not use oxytocin to control bleeding, the women are still in high risk of
haemorrhage. The researcher argue that the pregnant women’s choice of the first point
of care when experiencing a pregnancy related health problem is critical in
determining the outcome of the respective obstetric complication. Sepsis and
haemorrhage are among the leading causes of maternal deaths hence the pregnant
women’s persistent usage of TBAs should be discouraged but with alternative better
choices i.e. accessible high quality skilled healthcare.

On the other hand, despite their limitations the researcher agrees that TBAs plays an
important role in pregnant women’s health and their role should be acknowledged and
exploited by skilled healthcare providers and health planners. Because they are trusted
and highly respected by their communities, it is likely that women will continue using
TBAs services. Furthermore, TBAs were more accessible because they lived in the
community with women and when women did not have money to pay for services that
TBA accepted payments in kind (Zelalem et al, 2014). Given the fact that majority of
rural pregnant women are poor and unless the access to and quality of care is
improved at the health facilities TBA services will remain the women’s choice of first point of care.

The findings also showed the influence of social relations and social norms on pregnant women’s healthcare seeking behaviour. Pregnant women’s decision as whether or not to use skilled health services depended on whether the Spouse or Mother-in-law thought she should do so. Most of young mothers needed spouse approval to seek medical care and normally sought health advice from their Mothers-in-law. The researcher argues that the long existing traditions like these cannot be easily changed unless the influential groups in the society are given adequate health education about maternal health and healthcare requirements.

Furthermore, the extent to which an individual believes he/she has control over her health and the ability to access and act on the information determines the decision as to whether actually seek the health information or not. People usually seek the information which is perceived to be easily accessible and acted on. For a person who has limited access to health information and lacks decision making power with regard to his/her health condition is less likely for her to be the active seeker and user of health information.

### 7.6. Importance of Cues to Action and health information

The researcher also examined the influence of various cues to action e.g. health advice and other health information media on pregnant women’s healthcare utilization behaviour. The Health Behaviour Theories core assumption is that individuals are rational beings that use the available information to make decisions on whether or not to engage in recommended health behaviour. The theories asserts that individual’s behaviour is amenable to change if that person receives the relevant information (Sutton, 2002). The researcher argues that the rural pregnant women’s current healthcare seeking behaviour is influenced by the health information they have about pregnancy health and maternal care services and it could be changed if they are given relevant health information about maternal health. That is if these women are given appropriate maternal health education and information they would change their
healthcare utilization behaviour for better and improve their skilled healthcare utilization levels despite the existing cultural and social-demographic barriers.

Moreover, the ANC visits offers an opportunity for Skilled Healthcare Providers to offer health information and health education to pregnant women. The basic maternal health information usually includes health information about nutrition and diet, family planning, pregnancy danger signs, breastfeeding and labour and childbirth (WHO & UNICEF, 2003; Lincetto et al, 2006). Previous studies show that, the health information pregnant women receive during pregnancy influences their health behaviours throughout the pregnancy, childbirth and postnatal (ORC Macro 2002; Katende et al. 2000; Koblinsky et al. 1999; Olaniran et al. 1997; Measham and Kallianes 1995). Also, the pregnant woman’s knowledge about maternal health significantly determine her utilization of ANC (Alam et al, 2005; Nisar & White, 2003; Bhattia and Cleland; 1995). Hence, for rural pregnant women to effectively adhere to maternal healthcare requirements it is vital that they receive adequate and proper cues and maternal health information to help them make better informed decision about their pregnancy health and healthcare choices.

In developed countries and most urban areas in developing countries, pregnant women usually access health information from healthcare providers during ANC visits through one-on-one counselling or leaflets, brochures or books which are usually offered free of charge. Other media pregnant women use to access maternal health information includes TVs, radios and internet (Brodie et al, 1999; Fox and Jones, 2009; Lagan et al, 2010). However, in rural areas pregnant women are underprivileged, while TV and internet were not possible options with radio accessed only by few then healthcare provider remained to be the only choice for skilled health information about maternal health. As the only source of reliable health information, it was expected that pregnant women would be offered routine health information and health education during ANC visits. Unfortunately majority of these women were not offered any health information at the ANC clinics despite of being in high risk of developing complications due to poor living conditions and the existing low utilization of skilled maternal services.
Providing pregnant women with health information on preventive care helps the expecting mothers look after their health during pregnancy, childbirth and postnatal. The health information assists pregnant women in managing pregnancy health and handling pregnancy related complications when they arise (Lincetto et al, 2006; Owino et al, 2014). When offered adequate health information on preventive care the pregnant women are likely to become more cautious of their health during pregnancy and be able to timely identify pregnancy danger signs and healthcare requirements. Also the health education about appropriate nutrition during pregnancy will help expecting mothers maintain good health for both themselves and unborn baby by making informed decisions about food choices.

Furthermore, the findings show that even the women who had health problems and went to the health facility for medical care, the healthcare providers failed to share with women about their health problems. Women were not told what was wrong with them nor how to prevent it from happening again. The only plausible explanation could be because the healthcare providers disregarded pregnant women and considered them illiterate hence there was no need of sharing clinical information with them. It was observed that care providers perceived these women to be of low social status and low literacy (Chibet al, 2008; Tsawe et al, 2015). Because of their low literacy level they were less likely to know what kind of health information and maternal services they should receive when going for ANC clinic hence they were provided the minimum services possible.

Sharing health information about a health problem, its causes and, treatment options to pregnant women is likely to increase their maternal health literacy and improve healthcare utilization behaviours. Informing pregnant women about the causes of the respective health problem, the available treatment and how to avoid or reduce the possibility of it happening is likely to help these women’s make informed and better health decisions in the future. The researcher argue that unless, health information on illness is shared and women are clearly informed on pregnancy related illness, majority of women will continue to experience these cases and continue ignoring
and/or being late seekers of the required healthcare. The delay and non-use of skilled healthcare services which results to increased maternal deaths or disabilities.

However, it is arguable that non-provision of skilled health information to pregnant women was due to the poor conditions of the health facilities and hard working conditions of the healthcare providers. It was stated by the healthcare providers that because of the acute shortage of healthcare staff and high number of patients, they barely had time to talk to pregnant women during ANC visits (Tsawe et al, 2015). Hence, even if a pregnant woman came to the dispensary with the problem or questions about maternal health she could not get help because of the limited time healthcare providers spent with them during the visit. Nonetheless, despite the existing challenges healthcare providers face, there is still an opportunity to offer rural pregnant women the needed health education and advice to help mothers gain essential knowledge about maternal health. All pregnant women attended at least one ANC visit hence healthcare providers should take advantage of these visits to offer pregnant women health information they need.

Furthermore, the healthcare providers reported to be aware of the influence of other sources of maternal health information and the incorrect information pregnant women received from those sources. The researcher argues that, it is the skilled care provider’s responsibility to offer counter health information on the existing local perceptions and attitudes about maternal health. Unless these women are offered alternative health information about pregnancy and maternal healthcare they are very unlikely to change their attitudes and perceptions towards skilled health services and effectively utilize the services. The majority of the pregnant women in rural areas would continue being isolated with limited access to reliable health information about maternal health, lack of community’s support due to low awareness and the risk of maternal deaths and complications due to non-utilization of skilled healthcare services.
7.7. **Social Norms and Usage of Traditional Birth Attendant’s Services**

Consistent with findings from previous studies (Habimana, 1994; Walraven, 1999; Serizawa et al, 2014) in rural settings, the TBAs were still very influential and trusted by community members than the skilled healthcare providers. This could be because the TBAs share cultural (Marc et al, 2002; Zelalem et al, 2014) and health beliefs with the women and have strong ties with the communities. The long existing traditions like these cannot be easily changed unless the influential groups e.g. TBAs and Traditional Healers are given adequate health education on maternal health. The inclusion of key social groups helps in facilitating adoption of better healthcare seeking behaviours without affecting community traditions instead the proper knowledge would be easily shared and disseminated to pregnant women and the community in general (Serizawa et al, 2014).

Furthermore, the pregnant women’s persistent usage of TBAs as their primary source of maternal health information and services could be due to the fact that the TBAs lives with the women in the community (Zelalem et al, 2014). They are easily accessible and women may feel more comfortable confiding with them about maternal health issues rather than skilled healthcare providers. Also, it could be due to their availability and prompt response when needed for maternal services. Since, the TBAs are living in the community with pregnant women, they offer home visits services to their patients making them more accessible and reliable than nurses or doctors. Hence, it is conceivable that unless these women get another source of maternal health information that is convenient and trustworthy, they will continue using their current sources and services.

Another factor that worked in favour of TBAs was the small number of pregnant women they had to attend over a period of time. Despite the current usage of TBAs services by the pregnant women, the TBAs workload was relatively lighter compared to skilled healthcare providers in the same communities. The light workload made it easy for TBAs to remain friendly and attentive to pregnant women throughout the care delivery process. During childbirth pregnant women were given full attention and
assistance throughout labour and childbirth and postnatal. Unlike the skilled healthcare providers whom faced critical shortage of health staff and had to serve high number of patients from all population’s groups at a time.

Finally, their prompt response to the needed care significantly helped to save the lives of many women and children especially when called in critical stages. It was found that to avoid going to the health facilities most pregnant women waited until the labour was in late stages and call the TBA instead, where in most cases it did not allow the TBAs to refer the respective women to the health facility hence they had to help the women give birth.

However, despite their usefulness, the TBAs services still carries major health risks such as sepsis and HIV transmission. The poor working environment and lack of proper equipment increases the risk of maternal death by sepsis, HIV infection and severe bleeding, some of the leading causes of maternal deaths in Tanzania and developing countries today. TBAs normally used bare hands and unsterile tools like knives, razors, cloths and tables tops when attending women at birth, these working conditions subjects both mother and a baby to the risk of infections.

Furthermore, it is estimated that more than one million HIV infected pregnant women give birth without the skilled attendance at birth each year (Bulterys et al, 2002). The unskilled attendance at birth increases the chances of transmitting HIV from mother to child due to lack of the required intensive care during childbirth. The availability of antiretroviral drugs, elective caesarean sections and appropriate infant feeding choices reduces the perinatal HIV infections to as low as 2% (Chou et al, 2012). However, since these options were not available and/or expensive to the TBAs, the pregnant women using these services have increased risk of infections. Therefore the emphasis should still be in increasing the skilled healthcare personnel, improve quality of care and encouraging pregnant women’s usage of essential obstetric care through health education.

The women need to be aware of the available healthcare choices and the importance of skilled care during pregnancy, childbirth and postnatal. That is the enhancement of the quality of care is also not a panacea to improved utilization if the women are not
aware of the services and are not motivated enough to use the services. The researcher argue that apart from the perceived quality of care, the women’s utilization of healthcare services is influenced by what they know about maternal health and healthcare needs during pregnancy.

7.8. Conclusion

It is imperative that provision of routine, adequate and reliable maternal health information to pregnant women is critical for improved skilled healthcare seeking behaviour. The current vicious cycle (figure 5.1) of limited access of maternal health information and low utilization of skilled healthcare services need to be broken to enable rural women have access to maternal health information and make better and informed decisions on all matters pertaining pregnancy and eventually improve their skilled healthcare seeking behaviour.

The limited access to maternal health information caused majority of pregnant women to underestimate the risks of pregnancy related complications and how they responded to pregnancy danger signs and other ill-health conditions that raised during pregnancy. The majority of pregnant women reported not to seek and kind of care when experienced a health problem. It was also found that during labour some would go to the TBA for childbirth and later go to the dispensary when the TBA failed while others would just go for TBAs opinion and confirmation that it was real labour then go to the health facility. This delayed women’s timely access to obstetric care which is essential for positive outcome when a pregnant woman experiences a pregnancy or childbirth complications. Furthermore, the delay in seeking care was found to lead to increased home births and usage of TBAs services. But because the TBAs did not have expertise and equipment to handle complications it led to increased need for emergency services due to TBA’s delay in referring a complicated cases to the health facilities.
However, the health facilities in rural areas were not equipped for complicated childbirths and emergency cases that is why all high risk pregnancies were referred to the advanced health facilities ahead of time. But, the delay in seeking obstetric care escalated the effect of acute shortage of healthcare staff and lack of equipment and supplies because in addition to normal deliveries the healthcare providers had to deal with emergency cases which required more health staff and equipment that were not available, thus adding burden to the existing healthcare providers. This led to the care providers working longer hours which also affected the way they responded to pregnant women problems and concerns. Due to tiredness, strain and lack of equipment it was impossible to offer quality healthcare services to pregnant women resulting to dissatisfaction and negative attitudes towards skilled care by pregnant women.

As a result of dissatisfaction and negative attitudes, most women were discouraged to use skilled healthcare and delayed to start ANC and seeking care during labour in fear of being mistreated and unattended if they go early or if it was a false alarm. Others preferred they rather had home delivery or use TBAs than going to the health facility altogether. But, because they did not go to the health facility for ANC and healthcare services they had no other source of health information leading back to the problem of limited access to health information.

The researcher argues that the healthcare providers holds the key to break the cycle. Once the quality of care is improved means more women will have access to essential maternal health information as well as satisfaction and positive attitude towards skilled healthcare which is likely to motivate the women to utilize the services. Also when satisfied the women are likely to encourage others to use skilled healthcare leading to increased utilization levels and eventually reduce maternal mortalities (Figure 5.2).
CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS

8.1. Introduction

This is the final chapter of this thesis where the researcher propose a way forward regarding issues presented in the previous chapters for the improvement of rural women’s access to maternal health information and skilled healthcare utilization in Tanzania.

The study aimed at exploring Tanzanian rural women’s access to maternal health information and its impact on pregnant women’s healthcare seeking behaviour. The study specific objectives were to: examine the quality of maternal health services offered to rural pregnant women; examine pregnant women’s access to and sources of maternal health information; examine pregnant women’s knowledge (formal and local) on maternal health; examine pregnant women’s usage of maternal care services both formal and informal services and; determine their health information needs and preferences.

Twenty five pregnant women were interviewed and the data was collected qualitatively and analysed thematically. The researcher presumed that qualitative study would be an effective strategy to elicit detailed information from the participants on current maternal health information accessibility and individual women’s health behaviours. Through semi-structures interviews and focus groups the pregnant women were able to openly express their opinions and concerns about maternal healthcare and health information provision state in their communities. It also helped to elicit pregnant women’s knowledge (formal and informal) on maternal health as well as their maternal care service preferences. The use of both semi-structured interviews and focus group discussions helped to grasp individual and group perceptions towards skilled healthcare and unveil the local beliefs and practices towards pregnancy health and childbirth.

The findings from pregnant women were complemented by the interviews from primary care providers in the population. Five TBAs and five skilled healthcare providers were interviewed to offer further insights on the levels of maternal health knowledge among pregnant women and current maternal care utilization behaviour
from care provider’s perspective. Also the maternal care providers were interviewed to identify the differences and similarities in the type of care they offer to pregnant women.

The semi-structured interviews were flexible and allowed the researcher to accommodate new ideas that emerged as a result of the interaction with the study participants. In contrary to quantitative research methods where the researcher approach the study group with variables explicitly defined beforehand searching for cause-effect relationship between variables (McNabb, 2008), in qualitative study the researcher observed and measured pregnant women and care provider’s responses that only became explicit or significant.

The findings show that, the rural pregnant women in rural areas were still deprived of quality maternal healthcare services. The health facilities were in poor conditions with acute shortage of healthcare staff and lack of equipment and supplies. The evidence from the study suggests that pregnant women’s healthcare seeking behaviour was not only due to lack of access to skilled health information but also due to prior information obtained from their local sources. Lack of health information from health facilities caused majority of women to seek maternal health information from their Mothers-in-law, TBAs and fellow women in the community. It was found that, the use of local sources for maternal health information led to low maternal health literacy and incorrect perceptions towards pregnancy and maternal health which eventually affected pregnant women’s healthcare seeking behaviour.

8.2. Achieving Study Objectives

The study first objective was to assess the quality of maternal health services the pregnant women received at the health facilities as well as at TBA’s. The findings show that the health facilities in the study population had very acute shortage of healthcare staff and dire lack of essential equipment and supplies. This led to healthcare providers working in very poor environment with one of the health facilities lacking electricity and nurses had to use lamps at night to attend pregnant
women. Generally the quality of care at the health facilities was very poor. The TBAs on the other hand despite the lack of quality equipment and supplies their services were preferred by the majority of pregnant women. This was due to attention and caring nature of their services as well as being easily accessible when needed. However, regardless of TBA’s usefulness, pregnant women’s need for quality skilled maternal care services during pregnancy and childbirth is indispensable. The high quality continuum of care during pregnancy, childbirth and after birth to pregnant women is essential for the significant reduction of maternal deaths (Nuraini & Parker 2005; Bloom et al, 1999).

The second study objective was to examine pregnant women’s sources of maternal health information and their accessibility and reliability. The findings has shown that pregnant women were not offered routine maternal health information during ANC visits at the health facilities. As a result majority of these women had to seek and rely on their local sources and relations (e.g. Mothers-in-law, TBA and other women in the community) for maternal health information. The dependence on local sources had its shortcomings as the health information was only from personal experience and beliefs rather than expert advice. The lack of access to reliable maternal health information affected the women’s maternal health literacy levels as majority of pregnant women showed to have insufficient knowledge about maternal health healthcare in general.

The third study objective was to assess the impact of the health information pregnant women received on their maternal health knowledge/literacy levels and perceptions towards skilled healthcare. The findings show, that generally the maternal health literacy levels were still very low. Most women were not aware of the basic maternal health issues like: pregnancy danger signs; the recommended time to start ANC clinic; labour signs and/or; how to detect and react during ill health. The situation was exacerbated by women’s limited access to skilled maternal health information from care providers and a lack of alternative sources for reliable maternal health information. It constrained the majority of these women from becoming knowledgeable about maternal health which in turn limited their skilled healthcare utilization behaviour. This is a negative cycle.
As a result of low maternal health literacy, the pregnant women in the study population underestimated the risks of pregnancy danger signs and deliberately delayed to seek healthcare. The ANC and skilled attendance at birth was perceived as optional and that it was mainly for those with problems. Furthermore, most women delayed to start ANC to avoid making many visits to the health facility. Others delayed seeking medical help during labour and called TBAs instead to avoid going to the health facility for childbirth. This led to low/non-utilization of skilled healthcare in general.

However, the positive finding was that the rural pregnant women do trust and believe in the ability of skilled health services and expertise of skilled healthcare providers. This is an opportunity that offers the skilled healthcare provider an entry point to changing and improvement of existing beliefs and traditional practices on maternal health. Also changing pregnant women’s attitudes towards skilled healthcare services. Additionally, older and multiparous women were shown to be more maternal health aware than younger and first time mothers. Older women seemed to be more confident at asking about maternal issues and had greater control over their health decisions and were able to discuss health issues more easily with their spouses, mother-in-law or nurses. In contrast younger women, who were mostly married to older men, were perceived to be weak entities in the society and not capable of making their own decisions hence relied on their Mothers-in-law. Conversations during the interviews and focus group sessions indicated that Mothers-in-law play a major role in these women’s lives and that she made most of the decisions concerning maternal health. Thus, their advice and information was taken seriously by the pregnant women especially the young mothers. The decision whether to go to the health facility for medical help or not, or when to start attending the ANC, largely depended on the mother-in-law’s health literacy and opinion on the young mother’s health condition. This posed a major risk for these women’s health outcomes particularly in cases where mother-in-law believed in the efficacy of the TBAs rather than skilled maternal services. Therefore to improve population’s health information access and healthcare utilization behaviours it is necessary to ensure that the
respective communities empowers women to take charge of their maternal health and family health in general.

Lastly, the study examined the pregnant women’s maternal health information needs and preferences. Majority of women were aware that they needed health information on a range of topics. The results showed some variation in maternal health information preferences between younger women and older ones. For example, younger women wanted information about labour, family planning and childcare, this implies that information needed to be tailored to some extent to the needs of new mothers and intended users in general.

8.3. Contribution of This Thesis

The study was mainly concerned with the persistent high maternal mortality rates that exist in Tanzania today due to low/non-utilization of skilled maternal services. The primary objective of this study was to explore how rural pregnant women access maternal health information and its affect in their utilization of maternal care services. The literature in rural population’s access to health information and its effect is still very scarce particularly in developing countries. Hence, the study findings will contribute to the growing body of knowledge on population’s access to health information in the Tanzanian context. The findings could also be used by policymakers to enhance health information provision programmes in other developing countries.

The study used qualitative approach which allowed the rural pregnant women to freely express their views to the researcher and among themselves. The semi-structured interviews and focus groups provided in-depth information and insights on rural women’s experiences with maternal health information access and healthcare utilization behaviours. Qualitative tools provided the researcher information which would otherwise remain unknown as rural populations are normally marginalized and most researchers prefer surveys over face to face interviews. Furthermore, the use of different tools for data collection increased the validity and reliability of the study.
The novelty of this study is in its focus on investigating the accessibility of maternal health information from both informal (local) and formal (skilled) health information sources, and the impact of each source on pregnant women’s maternal health knowledge and health behaviour. The study did not only investigate the quality of health information pregnant women were offered/not offered at the health facilities, it also examined what they learnt and know about maternal health from other local sources and how it influenced their healthcare seeking behaviour.

The key finding of this study is that, the major health information challenge facing pregnant women in rural areas is not health information accessibility but rather the credibility of the health information received. The findings show that majority of pregnant women would have received certain amount of health information during the course of pregnancy, only that the information would be inaccurate. TBAs and mothers-in-law were main sources of maternal health information in the study population, the knowledge which they have acquired through past experiences and/or passed on by their elders. Therefore, lack of maternal health information was not the problem affecting pregnant women’s healthcare seeking behaviour, the problem was the accuracy of the information received. The researcher argue that to positively
influence rural women’s healthcare seeking behaviour, the government and policy makers need to ensure that the health information pregnant women receive is not only adequate but also accurate taking into consideration the community’s social norms and cultural beliefs.

This calls for inclusion and involvement of key community members e.g. TBA, elder women and mothers-in-law to be provided with adequate and accurate maternal health information which could be easily passed on to younger (mothers) generations. Hence the researcher suggests a new model (Fig. 8.1) of factors influencing healthcare seeking behaviour. The researcher propose that people’s healthcare seeking behaviour in influenced by; 1) Social norms which affect determine the 2) Sources of health information which also determine 3) Individual’s perceived severity, 4) Perceived benefits of health services and lastly 5) the perceived barriers to seek the recommended healthcare.

8.4. Study Limitations

However, the study also had some limitations. This study is a qualitative study and relied on voluntary participation of respondents who were ready to take part in the study. Hence, the study captured only the experiences of those who have participated in the study. The experiences of those who chose not to participate might have been very different and are not captured by this study. Furthermore, the participants had homogenous social and cultural background, hence if there were distinctions on how pregnant women in other cultures experience access and deal with maternal health information, their experiences also are not reflected in this study. It should also be noted that this is a small sample reflecting the experiences of pregnant women in one single rural population. This study was based only in sub-part of one region of Tanzania, which is a small portion of the country with more than 30 regions in total. Due to small sample size, the generalization of findings in this study to the larger Tanzanian rural populations should be undertaken with caution. Future research could involve more participants from other different parts of the rural Tanzania.
Second, the recruitment of Traditional Birth Attendants (TBAs) was through a process of purposive sampling. TBAs that were initially identified by pregnant women were used by the researcher to connect with other TBAs in the area, thus providing a snowball sample. So while the participating TBAs represented traditional local health services, in terms of cultural background and roles that they played in maternal healthcare, there is a possibility that the TBAs who participated had a greater understanding of traditional maternal care and a greater awareness of skilled maternal services issues than the average TBA. While the sample may not be representative of the larger community of TBA, the method used brought out the experiences of providers who were working with the pregnant women in the community. Generalizations about the practices, quality and content of maternal care services offered to pregnant women when they go to TBAs cannot be expected from this study. Other future studies could focus on the role of TBAs in maternal health behaviours and involve more TBAs from different parts of the country. Third, this study does not explore in depth the role male partners in pregnant women’s access to maternal information and healthcare utilization behaviour. Men’s views and perceptions on maternal health could have provided additional information on the subject and better understanding of the rural pregnant women’s health behaviours, but it was not investigated in this study. What it achieves is an understanding of how other informal local sources of maternal health information impacts women’s health and health behaviour. Further study is needed to establish how this might differ from other communities. The study was focused on TBAs and skilled care providers, it did not look in depth into other key community members such as spouses, mothers-in-law, religious leaders and women elders, though findings do indicate the impact of mothers-in-law in women’s healthcare seeking behaviour. This exploration clearly points to the need of expanding research in several directions. The role of informal sources of maternal health information in early complications identification, referral and treatment choices has been clearly identified but the responsiveness of pregnant women to maternal health information needs to be further researched. Results would help to design an improved intervention strategy. The finding that women seek maternal health information from available sources around them e.g. mothers-in-law and TBAs is important to build upon. An outreach and
health promotion strategy involving key stakeholders in maternal health from the community can be developed and tested.

8.5. Recommendations For Change

The study was concerned with the persisting high maternal mortality rates caused by low/non-utilization of skilled services among rural populations in Tanzania despite the increase in number of health facilities that offer skilled maternal health services. The primary objective of the study was to explore what the pregnant women in rural areas did know about maternal health and how it influenced their healthcare seeking behaviour. It explored why they still preferred TBAs as their first point of care despite of having health facilities in the vicinity. The findings of this study adds to the growing body of knowledge on population’s access to health information which will influence future research and highlight implication for practice for health promotion programmes, health information/education provision and health policy development.

The study highlighted the influence of local (informal information) knowledge on pregnant women’s attitude towards pregnancy and maternal healthcare. The research has shown that lack of skilled health information does not only contribute to low/non-utilization of skilled health services but also how the pre-existing maternal health knowledge influences pregnant women’s choice of the point of care and how they react towards ill health. The findings on the pregnant women’s knowledge and perceptions of maternal health and skilled healthcare will help in planning of contextualized health education campaigns and development of ANC guidelines.
8.5.1. **Implication for Policy Makers and Health Planners**

To increase utilization of skilled maternal healthcare and successful reduction of maternal deaths occurring in Tanzania today, the poorly served and unreached communities in rural areas must be reached and enabled to seek and access reliable health information on maternal health. The health planners and policy makers should focus on meeting the health information needs of rural populations in order to build a well-informed and knowledgeable society that makes better and well-informed maternal health decisions. There is a need for providing easy and friendly environment that enable convenient access to maternal health information as well as quality healthcare among rural populations especially pregnant women.

This could be achieved by building capacity to other potential groups in the society e.g. Community Health Workers, local health committees (Haines et al, 2007; Wathern & Harris, 2006) and Traditional Birth Attendants (TBAs). The government programmes on CHWs and TBAs training should be made more effective and focus aiming at equipping and empowering these groups to offer health information and health education to pregnant women and the general community. As trusted members of the society they are more likely to be accepted by pregnant women and respective society hence the delivered maternal health information would be easily adopted with confidence and acted upon as it would be perceived to be in line with local norms and beliefs.

Furthermore, since other information media e.g. internet and TV are not options to majority of rural women with radio being accessible by a few, other media channels for health information could be developed to enhance the maternal information access. Visual media such as picture magazines, posters, leaflets, songs, drama and plays could be used to facilitate access to maternal health information in rural populations. The use of media that are common, interesting and easy to be understood by the women and the general community would not only increase women’s access to maternal health information, but also facilitate health information seeking behaviour. Furthermore, previous studies (Eden, 1994; Hogbin & Fallowfield, 1989; Rosenbaum, 1986) show that people often forget what they have been told by care
providers during the hospital visits, hence supplementing the offered health information with other media e.g. leaflets and brochure could increase efficiency.

However, the mere use of these media and channels of communication to deliver maternal health information may also not lead to the desired outcomes if the content is poorly developed and not context specific. Factors e.g. cultural background, population’s education level, norms and social relations significantly influence how individuals receive and react to the provided information. Increasing access to health information is not sufficient in itself to induce behaviour change (Jamison et al, 2013) rather the content and how it is perceived by the recipients. The poorly managed maternal health information content may also lead to riskier health behaviours and choices. Hence, before the implementation of any health information provision programme there is a need for context specific studies to learn from the respective communities on what that information would mean to them and/or how it could be improved.

Understanding the community’s local dynamics such as relations, decision making hierarchy, norms and health perceptions of the target population are vital element for any successful intervention. Hence, to reap the benefits of skilled health information provision and effective utilization of skilled services the health planners need to have sufficient background information about the target population and fully involve the intended users of the health information in the planning and development of maternal health information content.

Moreover, normally when an intervention affects certain aspects of the population’s culture, beliefs or living styles, people tend to resist its adoption (Tripathy et al, 2010; Hartwick & Barki, 1994). Hence, their involvement and participation in the development process are likely to facilitate their understanding on benefits of the new maternal behaviours and the risks of healthcare non-utilization and perilous cultural practices. The local participants would also suggest the best ways in which an intervention could be implemented without affecting sensitive areas of the population’s culture and still be widely accepted and used. Further, the researcher believe that male involvement in maternal health matters would help to increase their awareness and knowledge on maternal health which could lead to increased
sensitivity and support toward pregnant women hence improving women’s care seeking behaviours.

With adequate knowledge on maternal health, spouses would be willing to offer assistance pregnant women need during pregnancy such as shifting some of house chores from a pregnant woman to other member of the family or society to give a woman enough resting time and opportunity to attend ANC clinic. They could also offer pregnant women childcare (other children) support when visiting ANC clinic. Pregnant woman who were given friendly and supportive environment they utilized the skilled services better than those who didn’t have adequate support (Simkhada et al, 2008).

### 8.5.2. Implication for Skilled Healthcare Providers

The findings has shown that as a result of poor services at the health facilities, the majority of pregnant women had negative attitudes towards skilled healthcare which aggravated the problem of non-utilization of skilled healthcare and lack of access to reliable skilled health information among pregnant women. However, the way women are treated could be improved to enable a better relationship and trust between the women and health service providers. For example, several women complained that when they go to the clinic with some health concerns the nurses are mean to them and sometimes sent them back without telling them what to do. Hence, for better healthcare seeking behaviour, there is a need for: First, a more friendly environment which would encourage more women to seek the maternal health information they need and enquire more from healthcare providers about various maternal issues they face on daily bases.

Second, the healthcare providers should take advantage of pregnant women’s attendance to ANC clinic to acquire prenatal cards to provide the women with essential health information on maternal health. Providing organized antenatal classes at least once a month could be an effective means of improving maternal health knowledge and encouraging skilled healthcare utilization for pregnant women living in rural areas. Adequate access to maternal health information increases pregnant
women’s confidence in maternal health and towards healthcare providers therefore they can easily express what information they need and how to get access to the necessary health information.

Third, to counteract the effect of healthcare staff shortage, care provider could work more closely with Community Health Workers, TBAs and local community leaders to organize population wide maternal health campaigns that enable pregnant women and the community as a whole to learn about maternal health issues and the primary care requirements for pregnant women. The health campaigns will enable the community and pregnant women to learn about possible danger signs; pregnancy complications and its treatment; childbirth preparation; labour and childbirth; family planning; childcare; and nutrition and diet. If these take place in the community or, at minimum distance with health service provider support, it would mean that young mothers and pregnant women in general would not have to depend, entirely, on unreliable local sources of health information. Besides, when the health information is perceived to be easily accessible and helpful, the pregnant women are more likely to be comfortable with the offered health information unlike when the health information is perceived to be insufficient and hard to access.

8.5.3. Recommendation for Future Research

The study achieved its research objectives, however due to some study limitations and issues which raised in the findings it shows that some topics should be investigated further. The following are recommended for further research:

- Qualitative approaches lack the ability to capture statistical evidence regarding, antenatal utilization, facility delivery, and postnatal utilization rates. Thus the use of a longitudinal survey design would be helpful in making definitive connections between health information access and utilization of maternal services. For example, while the study showed that some women are utilizing both formal and informal services, it was unknown to which extent
the pregnant women in the area preferred TBA services more over skilled services or vice versa.

- The study could be replicated in other rural populations involving larger number of participants to enhance the research data dependability and feed the health promotion program planners.
- A Participatory Action Research could be done in other rural populations with more number of participants to explore the local knowledge and beliefs that significantly affects pregnant women’s health healthcare seeking behaviours. And identify and exploit the local knowledges that have potential in facilitating pregnant women’s health behaviours.
- Another study should be done that includes different age groups of pregnant women to elicit deeper understanding on the health information needs and preferences between different age groups. This will help health managers and planners in developing health education contents and its delivery.
- This study proves that there is still work need to be done on maternal health knowledge and beliefs among rural populations before the skilled healthcare services are adopted and exclusively utilized by rural populations.

8.6. Concluding Remarks

The improvement of the quality of skilled healthcare services in rural areas is a prerequisite for achieving desired outcomes in maternal mortality reduction efforts in Tanzania (WHO, 2015). However, improvement of quality itself is not a panacea if pregnant women are not aware of the services, hence the healthcare providers should also focus in increasing provision of maternal health information to pregnant women. The findings show that the limited access to skilled maternal health information from healthcare providers and lack of alternative sources for reliable health information has constrained majority of these women from becoming maternal health literate hence affecting their levels of utilization of skilled maternal services. The healthcare providers and policy makers should focus on meeting the health information needs of
general rural populations and enable them to become well-informed and knowledgeable to make better and well-informed maternal health decisions.

There is a need for better ANC services, more healthcare staff, well-equipped health facilities with better infrastructures (electricity and better roads between health facilities) for improved maternal health information delivery and access. With more healthcare staff, the care providers will be able to spend more time with pregnant women both individually and as a group hence meeting the health information needs of majority of the women. Also with well-equipped health facilities the care providers will be able to offer more and better healthcare services hence increasing women’s satisfaction leading to positive attitudes towards skilled care services and improved utilization of skilled care services. On the other hand the improved infrastructure will simplify and facilitate pregnant women’s access to ANC services and health information and healthcare utilization in general.
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**Bibliography**


Appendix 1: Ethical Approval

RE: Insurance - Hilda Mwangakala

Zoe Stockdale

Tue 29/04/2014 11:32

To: Janet Harrison <J.Harrison@lboro.ac.uk>; Hilda Mwangakala <H.A.Mwangakala@lboro.ac.uk>
Cc: Mark Hipworth <M.Hipworth@lboro.ac.uk>

Dear Hilda, Janet and Mark,

Many thanks for your response to the Sub-Committee’s comments. I can confirm that you have responded to all of the comments, and that your study now has full ethical approval.

If in the future you wish to make any amendments to the study, you should contact me in the first instance.

Kind Regards,

Zoe

Mrs Zoe Stockdale
Secretary, Ethics Approvals (Human Participants) Sub-Committee
Research Office
Tel: 01509 222423
Email: Z.C.Stockdale@lboro.ac.uk Website: http://www.lboro.ac.uk/committees/ethics-approvals-human-participants/

from: Janet Harrison
sent: 15 April 2014 18:54
To: Zoe Stockdale

https://outlook.office365.com/owa/?viewmodel=ReadMessageItem&ItemID=... 25/07/2016
Appendix 2: Postgraduate Training Records

Postgraduate Research Student Skills Training Record

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**Department Based Training.** This includes external training approved by the Department and Vitae GRAD schools

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Signature of Student:

Date:

Signature of Supervisor:

Date:
Rural Women’s Health Information Access, Maternal Health Utilization of Skilled Maternal Services in Tanzania

Hilda Mwangakala, PhD Student, Loughborough University
Email: H.A.Mwangakala@lboro.ac.uk
Mark Hepworth, Reader in People’s Information Behaviour, Loughborough University, Email: M.Hepworth@lboro.ac.uk
Janet Harisson, Senior Lecturer, Loughborough University, Email: J.Harrison@lboro.ac.uk

ABSTRACT

Objectives: The purpose of this study was to examine rural women’s access to maternal health information, their maternal health literacy levels and its impact on levels of skilled healthcare utilization.

Method: A qualitative study involving 25 pregnant women was conducted in six villages of Chamwino district, in Dodoma region, Tanzania. Data were collected using semi-structured interviews and focus groups. Data was analysed thematically using the 4-stage guide to thematic data analysis.

Results: Maternal health literacy in the population under study was still low and therefore, very few women had adequate knowledge about maternal health issues. They were however, aware of what they needed to know, although this varied with age. The limited access to skilled maternal health information from care providers and a lack of alternative sources of reliable health information constrain the majority of these women from learning about maternal health or develop their health literacy capabilities. A lack of knowledge, in turn, limited their level of utilization of skilled maternal services.

Conclusions: There is a need for health information among rural women, especially pregnant women and new mothers. Care providers and policy makers should focus on meeting the health information needs of rural populations and
enable them to become well-informed and knowledgeable to make better and well-informed health decisions.

**Key Words:** Maternal health literacy, health information access, health information, pregnant women, maternal services, Antenatal Care,

**INTRODUCTION**

Maternal Health literacy is defined as ‘the cognitive and social skills that determine the motivation and ability of women to gain access to, understand and use information in ways that promote and maintain their health and that of their children (Renkert & Nutbeam, 2001, 381). A pregnant woman is considered maternal health literate if she is capable of identifying pregnancy danger signs, understanding the health and healthcare requirements and appropriate nutrition during pregnancy as well as identifying and using good quality information resources to effectively make informed decisions. The majority of maternal deaths that occur in developing countries today are preventable and are caused by delays in utilizing, seeking and accessing appropriate obstetric care (Chou et al, 2012) due to a lack of knowledge and opportunity.

The 5th Millennium Development Goal Strategy and Safe Motherhood Initiative requires a pregnant women to be given adequate health education and advise during Antenatal Care (ANC) visits to reduce delays in seeking skilled care and improve pregnancy complication management when they arise (Chou et al, 2012). Antenatal education aims to improve pregnant women’s maternal health literacy by equipping women with knowledge and skills on health during pregnancy, childbirth and basic baby care skills (Renkert & Nutbeam, 2006). Studies shows that women with adequate maternal health literacy are more likely to start ANC clinic early, effectively adhere to ANC appointments, have better neonatal birth weight and gestation age at birth (Kohan et al, 2007; Ohnishi et al, 2005).
However, the majority of women in developing countries do not receive the recommended maternal health information during ANC visits or receive health information that would help them to effectively handle complications (Nikiéma et al, 2009). Further, under-staffed health facilities, poverty, norms and cultural practices prevent majority of women from seeking and accessing required maternal health information. Lack of proper information about pregnancy and childbirth causes women to underestimate the risks of pregnancy-related complications leading to late and/or non-utilization of skilled health services (Nikiéma et al, 2009). Thus, to improve women’s utilization of skilled maternal services, their maternal health experiences, need for and current access to maternal health information behaviour and needs to be understood to enable improvements to take place. Little research has been done on how women’s access to maternal health information influences their maternal health literacy and its impact on levels of utilization of skilled maternal services. This paper examines rural women’s access to maternal health information, their maternal health literacy levels and its impact on levels of skilled healthcare utilization.

METHODS

The study was done in six sub-villages of Msanga and Buigiri wards in Chamwino district, Dodoma, Tanzania. Each sub-village has an average population size of 1000 people. The major ethnic group in the study site was from Gogo ethnicity and the main economic activity in this population is farming. The average adult literacy level of the population is 49% being higher among men (59%) than that of women (41%).

Semi-structured interviews and focus groups were conducted with pregnant women living in the area. Interviews were carried out in the participant’s homes while focus groups were carried out at the community leader’s house. The questions were developed to explore the following issues: women’s knowledge on maternal health, current usage of maternal services, health information access, availability of skilled maternal services, challenges they face in the
community and at the health facilities women’s attitude toward skilled maternal services.

The study was conducted between March and July 2014. It involved all pregnant women in the community who consented to take part in the study. 42 out of 45 women consented to participate and the other three refused to participate. The researcher used health workers and community leaders to identify all pregnant women available in the community. All discussions were recorded using a voice recorder and transcribed by the researcher.

Interviews were conducted with all 42 pregnant women living in the area, regardless of their gestational age or whether they have attended an ANC clinic or not. The questions were divided into the following categories: women’s maternal history, knowledge on maternal health, current usage of maternal services, health information access, availability of skilled maternal services, and women’s attitude toward skilled maternal services. Interviews lasted between 25 minutes and one hour.

Four focus groups were conducted with 25 pregnant women. The first two focus group consisted of 6 and 7 older pregnant women with more than 2 children. The third and fourth groups consisted 6 and 6 younger pregnant women with less than 2 children and first time expecting mothers. Women were divided according to their age and maternal experience to allow women to speak freely among each other. The topics for focus group discussions mostly came from issues that rose during interviews. The following questions were asked: why the majority of women delay in starting ANC clinic, why some women do not use health facilities for childbirth, what challenges they face in the community and at the health facilities during ANC visits. Women were also asked how they learn about maternal health issues and what kind of health information and education they would like to receive when visiting ANC clinics. Each focus group lasted for about one hour. Data was analysed thematically. The 6-stage guide to thematic data analysis was followed (Braun & Clarke, 2006). The six stages of analysis were data familiarisation, coding and re-coding the data, developing categories and reviewing categories.
FINDINGS

Health Information Access

Skilled Health Information Provision

During interviews women were asked whether they were given any health information when visited ANC clinic and what kind of health information did they receive. The response varied among women, some said they were given maternal health information at the clinic. For example, one woman said;

“In the hospital they told me if I start bleeding or have severe stomach pain I should go to the hospital. They also told us not to carry heavy buckets of water or other heavy things”.

Another woman gave similar response:

“In the hospital they tell us not to walk in the sun for long, to drink a lot of water, and eat fruits…”

Others said they were never told anything about pregnancy or childbirth in the clinic apart from receiving vaccination, food supplements and abdominal check. A young girl and mother of one said;

“They don’t tell us anything in the clinic, when you get there the nurse takes your card and tell you to lie down, after checking your stomach she tells you to go”.

This was reiterated by another woman;

“They don’t give us any training, when I got there she told me to stand on the weighing scale, gave me malaria drugs and Tetanus injection then she told me to go”.

Women’s attitude towards care providers and care provider’s attitude towards women was also found to be a limiting factor to health information provision. It was observed that care providers perceived women to be of low social status and illiterates. Low literacy meant that they were less likely to know what kind
of health information and services they should receive when going for ANC clinic hence provided the minimum service possible. Poor services caused the majority of women to have a negative attitude toward care providers. Responding to the question on what is her opinion on the services provided at the health facility, a woman said:

“...I’m not satisfied, the services are poor; when we go there they don’t tell us anything…”

Responding as to whether she experienced any of the danger signs and what happened at the hospital, another woman said

“When I was three months pregnant I had pains when urinating and stomach pain, I went to the hospital. It is not treated yet I’m still on medication. I don’t know what caused it they didn’t tell me”.

Providing access to and discussing diagnostic results, treatment options and the causes of the health problem with women is likely to improve their maternal literacy and preventive care utilization behaviours. In this study, however, women who experienced a complication and went to the hospital for treatment were not told what the problem was, what caused it or how to prevent it from happening again. One woman said

“I had severe stomach pain, I went to the hospital. They examined my stomach and gave me some drugs. It was treated”.

“...I don’t know what caused it, they never told me…”

**Type of Health Information Provided**

Maternal health information was provided to only few women attending ANC clinic and the common health information that was provided to these women were on pregnancy danger signs. Only two women reported to have been taught about food and nutrition during pregnancy. None of the women was told anything about general health during pregnancy, childbirth and labour, family planning or basic baby care skills.
Sources of Health Information

Women were asked how did they learn about maternal health issues like when to start attending ANC clinic, how to detect danger signs and what to do when a complication rise. Apart from those who were told at the hospital, others were told by Traditional Birth Attendants (TBA) or relatives e.g. grandmother and mother-in-law. For example one woman said:

“My mother-in-law is a TBA she told me if I start bleeding or have severe stomach pain then maybe there is something wrong with the pregnancy....“.

Responding to the same question, another woman said:

“...I was told by other older women that I should start going to the clinic in the fourth month of pregnancy”.

Maternal Health Information Sharing Behaviour

Through interview conversations and focus group discussions, it was revealed that in the study population, mother-in-law plays a key role in pregnant women’s health. She is the key decision maker on all matters pertaining woman’s pregnancy and health particularly to young women. It is a norm that a woman should consult her mother-in-law first on any issue concerning pregnancy. For example, one of the woman responded:

“I didn’t start attending ANC clinic on time because my mother-in-law said it is too early, I should wait until five months.”

Maternal Health Literacy

During the interviews, women were asked whether they are aware of any three pregnancy danger signs. Several women were relatively aware of some pregnancy danger signs stating that they have been told in the hospital. Others learnt through TBAs and other family members:
“My mother-in-law is a TBA she told me if I start bleeding or have severe stomach pain then maybe there is something wrong with the pregnancy...“.

Other women had little or no knowledge about pregnancy danger signs or when they were required to start attending ANC clinic. The majority of women in this group were first time mothers and although some had already attended ANC clinic more than once still they were not aware of any pregnancy danger signs. Two first time expecting mother responded:

“I don’t know, this is my first pregnancy and I have never been told at the ANC clinic”

“...I don’t know any, they never told me in the clinic.........”.

Skilled Maternal Care Utilization

Women with adequate maternal health literacy are expected to be prompt in seeking maternal care when required or whenever they experienced any alarming condition during their pregnancy. However, most of the women in the study area tended to not immediately seek medical help whenever they experienced a condition that needed medical attention nor did they start ANC clinic on time. When asked if they have ever experienced any complication or danger sign in this pregnancy and what they had done about it. A six months pregnant woman said:

“Currently I feel pain when urinating and I also have vaginal discharge but I have done nothing yet”.

The delay in seeking appropriate care was partly due to ignorance or overconfidence due positive past experience. Women who have many children tend to rely on their experiences with previous pregnancies to make health decisions on the current pregnancy. Most women felt that since nothing serious had happened in the previous pregnancies that they could easily handle the
current pregnancy. For example one woman stated that when pregnancy complications arise, she was unconcerned:

“…I am an experienced mother, I’m not worried anymore when I feel that way I just lie down for a while then I feel ok”.

The majority of women in the community delayed visiting the ANC clinic and most started attending clinics five months after becoming pregnant. Several reasons were given by women as to why they delayed. The most common reasons were farming activities and that spouses were absent and were avoiding attending ANC visits. One woman who was six months pregnant cited the effort required to get to the clinic and said;

“I will start next month, we get tired of walking to the clinic every month; if I start late I will only need to go there few times”.

A five months pregnant woman gave similar statement:

“Going there every month I get tired of walking, I’m delaying so I can only go there few times”.

Place of care

The preferences for place of care varied between women both health literates and those with low health literacy. Some women tended to go straight to the health facility while others go to the TBAs first for their opinion before going to the health facility. A 28 years old woman and mother of two said;

“When I have stomach pain I usually go to the TBA for her to check if I’m in labour or not, If she says it’s labour then I go to the hospital”

(IS.

Another woman said;

“In my last pregnancy in the fifth month I started bleeding, I went to the TBA and she gave me some traditional drugs then it stopped, I didn’t go to the hospital”.

250
This indicates that, together with utilizing the ANC services some women still rely on TBAs services. This is partly because TBA services are more accessible than formal maternal services, since these TBAs lives within the community and can be called to the home anytime.

In other cases women delayed to start ANC because their spouses were reluctant to go to the clinic for fear of testing HIV positive and others were not around. One woman who she did not even know how old her pregnancy is, said;

“I have not yet started attending ANC clinic because my husband is not around he ran away. I went to the clinic alone and told the nurse that my husband has ran away but she refused to register me. I even had a letter from the village chairperson but she still refused to register me”.

It turned out that she was nine months pregnant when interviewed and delivered a few days later. The husband also returned after few weeks. Several other women reported delays in visiting the ANC clinic because their spouses were not around.

DISCUSSION

Generally, maternal health literacy in the population under study was still very low and few women showed an adequate knowledge about maternal health issues. The limited access to skilled maternal health information from care providers and a lack of alternative sources of reliable health information has exacerbated this situation and has constrained the majority of these women from becoming maternal health literate and health knowledgeable, which in turn has limited their levels of skilled maternal service utilization. This is a negative cycle.

Older and multiparous women were shown to be more health literate than younger and first time mothers. Older women seem to be more confident at asking about maternal issues and had greater control over their health decisions and were able to discuss health issues more easily with their spouses, mother-in-law or nurses. In contrast younger women, who were mostly married to older
men, were perceived to be weak entities in the society and not capable of making their own decisions. Conversations during the interviews and focus group sessions indicated that mothers-in-law play a major role in these women’s lives and that she makes most of the decisions concerning maternal health. Thus, the decision whether to go to the health facility for medical help or not, or to start attending the ANC, largely depended on the mother-in-law’s opinion on the young mother’s health condition and their health literacy. This poses a major risk for these women’s health outcomes particularly in cases where mother-in-law believes in the efficacy of the TBAs rather than skilled maternal services.

In promoting the Prevention of Mother To Child HIV Transmission (PMTCT) campaign in Tanzania, it is now a policy that, for the first ANC clinic visit pregnant women should go with their spouses for HIV testing otherwise they are not accepted. The PMTCT policy is meant to protect children from being infected with HIV. However, in populations where HIV awareness is low, particularly in rural areas, this has resulted in maternal healthcare underutilization. Some men tend to run away or travel on purpose once they become aware that their wives are pregnant and return soon after delivery. This has caused women to refrain from seeking maternal care on time in fear of being rejected by care providers at the health facilities. Thus, there is a need for more HIV and maternal health awareness campaigns in these populations.

Due to low maternal health literacy, most women were not well informed about maternal issues although majority of women were aware that they needed information on a range of topics. The results showed some variation in maternal health information preferences between younger women and older ones. For example, younger women wanted information about family planning and childcare, implying that information needed to be tailored to some extent to the needs of new mothers. In addition because of their status they tended to be more dependent on mothers-in-law who may not be well informed or rely only on TBAs.
Providing access to and discussing diagnostic results, treatment options and the causes of the health problem with women is likely to improve their maternal literacy and preventive care utilization behaviours. In this study, however, women who experienced a complication and went to the hospital for treatment were not told what the problem was, what caused it or how to prevent it from happening again.

The results indicated that better information could be provided by antenatal clinics or, ideally, in the community to enable women to learn about possible danger signs, complications, treatment, disease and prevention, childbirth, childcare, family planning, nutrition and diet. In addition, the way women are treated by care providers could be improved to enable a better relationship and trust between the women and health service providers. For example, several women complained that when they go to the children’s clinic and when the child’s weight fall the nurses scold them without telling them what to do.

**CONCLUSION**

There is therefore a need for health information among rural women, especially pregnant women and new mothers. It is unfortunate that these needs are currently not met despite the fact that these women are in high risk of complications occurring. It is evident that maternal health literacy needs to be enhanced to help mothers know and express what information they need and how to get access to and use the necessary information. Other factors such as distance from the ANC imply that maternal health information should be available in the community. This could be achieved by improving maternal health literacy among women, in general but specifically pregnant women and new mothers. Furthermore, due to the influence of the family and the community, effective, population wide, maternal health campaigns that enable the community as a whole to learn about maternal health issues and the primary care for pregnant women are required. If these take place in the community or, at minimum distance through health service providers, it would mean that young mothers and mothers in general would not have to depend, entirely, on
others in the nearby community. Moreover, women need to approach their current use of information, in the community, critically and effectively.

Thus, for the effective utilization of skilled maternal services and successful reduction in preventable maternal deaths occurring in Tanzania and other developing countries, the poorly served and unreached communities in rural areas must be reached and enabled to seek, access and use maternal health information. Care providers and policy makers should focus on meeting the health information needs of rural populations in order to build a well-informed and knowledgeable society that makes better and well-informed health decisions. This implies that people’s health information literacy capacity needs to be enhanced whereby maternal women critically reflect on their information needs and how these could be satisfied through more effective use of available information and future information provision. Providing organized antenatal classes at least once a month could be an effective means of improving health information knowledge and encourages service access and positive health outcomes for pregnant women living in rural areas. Furthermore, various channels of maternal health information need to be developed to enhance the information available and its use, such as cartoons, posters, leaflets, theatre in the community and plays on the radio could be used to facilitate access to information. Mobile health libraries could also be used to facilitate women’s access to maternal health information.

REFERENCES


Appendix 4: Poster Presented at IDMC Conference

Rural Women’s Health Information Access, Maternal Health Literacy And Skilled Maternal Care Utilization

Hilda Mwangaoka, Mark Hepworth, Janet Harrison, Centre for Information Management, Loughborough University

BACKGROUND

- Maternal Health literacy is the cognitive and social skills that determine the motivation and ability of women to gain access to, understand and use information to promote and maintain their health and that of their children.
- Low maternal literacy and lack of proper information on maternal health causes delays in seeking obstetric care leading to increased number of maternal deaths caused by pregnancy-related complications.
- Currently Only 48% of women make four or more Antenatal Care (ANC) visits during pregnancy.
- More than 40% of births are delivered out of the health facility:
  - 28% are assisted by relatives and
  - 13% by Traditional Birth Attendant (TBA)
- 4% without any help.

AIMS AND OBJECTIVES

To examine maternal health literacy levels of pregnant women living in rural Tanzania and how they become informed about maternal health issues and healthcare utilization.

PRELIMINARY FINDINGS

- Health information access is dependent on the credibility and availability of sources of information, the types of information the pregnant woman receives, health information sharing behaviour and pregnant women’s levels of health literacy.

CONCLUSION

- There is a need for health information among rural areas, especially pregnant women and new mothers.
- Unique access to health information is improved majority of rural women will remain as emergent health literate and inactive users of skilled materinetes.
- In order to improve maternal care utilization, maternal health literacy needs to be enhanced to help mothers learn and express what information they need and how to get access to and use the necessary information.
- Care Providers plan a key role in transforming pregnant women from emergent literates to self-learning literates through:
  - ANC Classes
  - Sharing with women alternative of health information
  - Building pregnant women’s trust in skilled care
  - Building women’s confidence in health information inquiry

METHODLOGY

- Method: Data was collected using semi-structured interviews and focus groups.
  - The sessions were developed to explore women’s maternal health literacy on maternal health, awareness of maternal services, health information access, availability of skilled maternal services, women’s attitude toward skilled maternal services
  - Participants: The study involved 32 pregnant women regardless of gestational age.
  - Analysis: Thematic analysis was used to analyse the collected data.

FINDINGS cont.

- There were 32 pregnant women.
  - 25 were literate and 7 were illiterate.
  - The majority rated information access as being inadequate.
  - Many women reported that they prefer health information from health care providers.
  - There was a lack of information sharing among pregnant women.

REFERENCES

Appendix 5: Research Permit

CHAMWINO DISTRICT COUNCIL

DISTRICT MEDICAL OFFICER
P. O. BOX 1126
CHAMWINO, DODOMA
20/02/2014

To Whom It May Concern

RE: RESEARCH PERMIT FOR MS. HILDA A. MWANGAKALA

This is to confirm that Ms. HILDA A. MWANGAKALA a PhD student from Loughborough University, UK has been granted a permit to conduct her research in Chamwino district. The research focuses on Exploring Pregnant Women’s Utilization of Maternal Services and it will involve talking to health staff in dispensaries and Health Centres in Chamwino District.

Please provide her with the needed support and cooperation.

For: District Medical Officer

Halima Warsama
Appendix 6: Participant’s Information Sheet

Pregnant Women’s Access to Maternal Health Information and Its impact on Healthcare Utilization Behaviour In Rural Tanzania

PARTICIPANT INFORMATION SHEET

The following are the contact details of the researchers involved in the study.

Principal Researcher:

Hilda A. Mwangakala, Centre for Information Management, School of Business and Economics, Loughborough University, Loughborough, Leicestershire, LE11 3TU.

Email: h.a.mwangakala@lboro.ac.uk
Tel: +44 7425810332
    +255 785444885

Co-researchers:

Dr. Janet Harrison, Centre for Information Management, School of Business and Economics, Loughborough University, Loughborough, Leicestershire, LE11 3TU.

Email: j.harrison@lboro.ac.uk
Tel: +44 (0)1509 223055

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What is the purpose of the study?

The study aims at understanding the impact of accessibility of maternal health information on pregnant women healthcare seeking behaviour in rural Tanzania. Why majority of these women do not utilize skilled maternal health services and how they can be facilitated to utilize the services. The information learned during the study will be used to develop a model for health intervention that will promote women's utilization of skilled maternal services.

Who is doing this research and why?

This study is a part of a PhD research project funded by Commonwealth Scholarship Commission and Loughborough University.

Once I take part, can I change my mind?

Yes you can! Your participation is voluntary. We would like you to consent to participate in this study as we believe that you can make an important contribution to the research. After you have read this information sheet and asked any questions you may have we will ask you to complete an Informed Consent Form, however if at any time, before, during or after the sessions you wish to withdraw from the study please just contact the principal researcher. You can withdraw at any time, for any reason and you will not be asked to explain your reasons for withdrawing.

Will I be required to attend any sessions and where will these be?
As part of the study you will be required to participate in interviews and focus group discussions which will be conducted at home and the village square respectively. The interview will be the time when you and the researcher talk together in confidence. The focus group is different to the interview; this is your opportunity share your views with other Pregnant Women. In focus groups you will be in a group with 6 to 8 other pregnant women from your village.

**How long will it take?**

You will be required to participate in one interview and two focus group sessions which will be conducted at different meetings. The interviews will take about 1 to 1.5 hours and focus groups will take 1.5 to 2 hours each. In total, the study will take about 6 hours.

**What will I be asked to do?**

If you are happy to participate in the study we will ask you to read this information sheet, sign the consent form and return it to the principal researcher. During the interviews and focus groups, the researcher will ask you some questions regarding your current and previous pregnancies and maternal health related information. There are no right or wrong answers to the questions.

We want to hear many different viewpoints and would like to hear from everyone. We hope you can be honest even when your responses may not be in agreement with the rest of the group. You will first be interviewed individually by the researcher about your current and previous pregnancies and maternal care. Then in a different session you will participate in focus group discussion where you will be with other 6 to 8 pregnant women from your village to discuss about healthcare and maternal health issues in your community. The interviews will be conducted at home while the focus group discussions will be held at the village square.
What personal information will be required from me?

During the interviews the researcher will ask some personal information about you, this will include your age, sex, and occupation. You will also be asked about previous and current pregnancy and how you seek and utilize the healthcare services plus other information related to your pregnancy(s). The conversations will be recorded using a Tape Recorder.

Are there any risks in participating?

Whilst you may be asked to answer questions on your previous and current pregnancy and maternal health, all information provided by you will be kept confidential at all times. All responses to our questions and information provided by you will remain anonymous i.e. no personal details relating to you or where you work/live will be recorded anywhere. Only members of the research team will have access to the information you provide.

Will my taking part in this study be kept confidential?

All information you provide to us will be kept confidential. Only members of the research team will have access to it. All data collection, storage and processing will comply with the principles of the Data Protection Act 1998. Under no circumstances will identifiable responses be provided to any other third party. Information coming from the study will only be made public in a completely aggregate level in order to ensure that no participant will be identified. The audio recordings will be kept in a secure place and not released for any use by third parties. The recordings will be destroyed within ten years after completion of the investigation.
What will happen to the results of the study?

All information provided by you will be stored anonymously on a computer and analysis of the information obtained will be undertaken by the research team based at Loughborough University. The results from this analysis will be available in one or more of the following sources; scientific papers in peer reviewed academic journals and presentations at conferences and local seminars.

I have some more questions who should I contact?

Any questions you have can be answered by the researcher before, during and after the study, just feel free to ask. If you have a question once the researcher has left the study site, feel free to contact the principal researcher at any time using the contact details at the top of this document.

What if I am not happy with how the research was conducted?

This study has been approved by the Loughborough University Ethical Approvals (Human participants) Subcommittee. If you have any concerns or complaints about the conduct of this study you can contact the Secretary to Ethical Approvals (Human participants) Subcommittee at Z.C.Stockdale@lboro.ac.uk. The University also has a policy relating to Research Misconduct and Whistle Blowing which is available online at http://www.lboro.ac.uk/admin/committees/ethical/Whistleblowing(2).htm.
Appendix 7: Participants Consent Form

Pregnant Women’s Access to Maternal Health Information and Its impact on Healthcare Utilization Behaviour In Rural Tanzania.

INFORMED CONSENT FORM
(to be completed after Participant Information Sheet has been read)

The purpose and details of this study have been explained to me. I understand that this study is designed to further scientific knowledge and that all procedures have been approved by the Loughborough University Ethics Approvals (Human Participants) Sub-Committee.

- I have read and understood the information sheet and this consent form.
- I have had an opportunity to ask questions about my participation.
- I understand that I am under no obligation to take part in the study.
- I understand that I have the right to withdraw from this study at any stage for any reason, and that I will not be required to explain my reasons for withdrawing.
- I understand that all the information I provide will be treated in strict confidence and will be kept anonymous and confidential to the researchers unless (under the statutory obligations of the agencies which the researchers are working with), it is judged that confidentiality will have to be breached for the safety of the participant or others.

I agree to participate in this study.

Your name

Your signature

Signature of investigator

Date
Utafiti kuhusu Upatikanaji wa Taarifa za Afya na Utumiaji wa Huduma za Kitaalamu za Afya na kwa Mama Wajawazito Chamwino Dodoma

FOMU YA TAARIFA KWA WASHIRIKI

Zifuatazo ni taarifa za mawasiliano za watafiti wote wanaohusika na utafiti huu.

Mtfiti Mkuu:

Hilda A. Mwangakala, Centre for Information Management, School of Business and Economics, Loughborough University, Loughborough, Leicestershire, LE11 3TU.

Barua Pepe: h.a.mwangakala@lboro.ac.uk
Simu: +44 7425810332

Mtfiti Mwenza:

Dr. Janet Harrison, Centre for Information Management, Skuli ya Biashara na Uchumi, Chuo Kikuu cha Loughborough, Loughborough, Leicestershire, LE11 3TU.

Barua Pepe: j.harrison@lboro.ac.uk
Simu: +44 (0)1509 223055
Nini Lengo la Utafiti Huu?
Utafiti unalenga kuchunguza na kuelewa mwenendo wa tabia za mama wajawazito kwenye utumiaji wa huduma za afya za mama mjamzito zipatikanazo kwenye maeneo yao. Utafiti unakusudia kuelewa wamama wajawazito wengi waishio nje ya miji huwa na utumiaji hafifu wa huduma za afya zitolewazo kwenye vituo vya afya na jinsi gani wakina mama hawa wanawezana kuhamasishwa kutumia huduma hizi za afya. Taarifa zitakazo patikana kwenye utafiti huu zitatu mika kusaidia kuandaa programu mbalimbali za kuhamasisha utumiaji wa huduma za afya kwa mama wajawazito.

Ni nani anayefanya utafiti huu na kwanini?
Utafiti huu ni sehemu ya masomo ya uzamivu yanayofadhiliwa na Kamisheni ya Jumuiya ya Madola na Chuo Kikuu cha Loughborough.

Je Nikishashiriki mara moja, naweza kujitao?
Je nitahitajika kuhudhuria mkutano wowote na utafanyika wapi?

Ndiyo, kama sehemu ya utafiti utahitajika kushiriki mkutano wowote na utafanyika ambapo mahojiano yatafanyika nyumbani kwako and majadiliano yatafanyika eneo la mikutano la kijiji. Mahojiano itakuwa ni kipindi ambacho wewe na mtafiti mtaongea pamoja kwa faragha na uwazi. Na majadiliano ni tofauti na mahojiano, kwenye majadiliano itakuwa ni nafasi yako kutoa, kuwakilisha na kushirkisha mawazo yako pamoja na wamama wajawazito wengine kwenye eneo lako. Kwenye majadiliano mtakuwa kwenye makundi ya watu 6 hadi 8 wote mkiwa ni mama wajawazito kutoka kijiji kijiji.

Itachukua muda gani?


Je, nitahitajika kufanya nini?

Kama uko tayari kushiriki kwenye utafiti tutakuomba usome fomu hii ya taarifa vizuri na kusaini fomu ya kukubali kushiriki na kuirudisha kwa mtafiti mkuu. Wakati wa mahojiano na majadiliano, mtafiti atakuuliza maswali kuhusiana na ujauzito wako wa sasa na uliopita na taarifa yingine zinazohusu afya ya mama mjamzito. Hakuna jibu lilio sahihi na lisilo sahihi kwenye utafiti huu. Tunataka kusikia maoni na mitazamo tofauti mingi iweze kana kwenye utafiti kutoka kwa kila mmoja. Tunategemea utatupa mawazo na majibu halisi hata kama yatatofautiana na wengine kwenye kikundi.

Kwanza utahojia peke yako na mtafiti kuhusu ujauzito wako wa sasa na uliopita na utumiaji na upatikanaji wa huduma za afya kwa ujumla. Pili, utashiriki kwenye majadiliano ambapo utakuwa na wanawake wengine 6 hadi 8 wajawazito kutoka kijiji kijiji kwako kujadiliana kuhusu masuala.
mbalimbali yahusuyo upatikanaji wa taarifa za afya na huduma za afya kwa mama wajawazito na pia kuhusu mambo mbalimbali yaliyoibuka wakati wa mahojiano na mtafiti. Mahojiano yatafanyika nyumbani wakati majadiliano ya vikundi yafanyika nyumbani kwa mwenyekiti wa kijiji.

Je taarifa gani binafsi zitakazohitajika kutoka kwangu?
Wakati wa mahojiano mtafiti ataomba kujua baadhi ya taarifa zako binafsi kama umri wako, kazi yako na taarifa nyingine kuhusiana na ujauzito wako. Maongezi yote yatarekodiwa kwa kutumia kifaa cha kurekodia.

Je, kuna hatari yeyote ya kushiriki kwenye utafiti?
Hapana, maswali yote utakayoulezwa na majibu utakayotoa kuhusiana na ujauzito wako na upatikanaji na utumiaji wa huduma za afya zitakuwa ni siri. Na majibu yako yote utakayotoa yatabaki kuwa siri na hakuna taarifa zozote kuhusu jina lako wala mahali unapoishi zitaandikwa au kutajwa popote. Ni watafiti pekee ndio watakaosoma taarifa ulizotoa.

Je, ushiriki wangu kwenye utafiti utabaki kuwa siri?

Nini kitatokea kwa taarifa zitakazopatikana kwenye utafiti?
Taarifa zote zitazotolewa na wewe zitahifadhiwa kwenye kompyuta bila majina ya washiriki kutaja na uchambuzi wa taarifa zilizokusanywa utafanywa na watafiti tu watakao kuwa Chuo Kikuu cha Loughborough.
Matokeo ya uchambuzi huo yataweza kupatikana na kuwasilishwa kwa njia zifuatazo; machapisho ya kitaaluma, kwenye majarida na uwasilishaji kwa njia ya mikutano ya kitaaluma na mikutano ya wenyeji.

Nikiwa na maswali zaidi kuhusu utafiti nimuone nani?
Jisikie huru kuuliza maswali yoyote utakayokuwa nay o iwe kabla, wakati au baada ya utafiti. Ukiwa na maswali baada ya mtafiti kuondoka eneo lako, wasiliana na mkuu wako wa mtaa ye wa mtafiti mkuu, pia jisikie huru kumuuliza mtafiti mkuu kwa kutumia mawasiliano yaliyoonyeshwa hapo juu ya fomu hii.

Nitafanyaje kama sikuridhishwa na jinsi utafiti ulivyofanywa?
Utafiti huu umethibitishwa na Kamati maalumu ya Maadili ya Utafiti wa Binadamu ya Chuoo Kikuu cha Loughborough. Iwapo utakuwa na jambo au malalamiko yoyote kuhusu utafiti tafadhali wasiliana na Katibu wa kamati kwa kutumia simu ya mkononi:........................................ au barua pepe: Z.C.Stockdale@lboro.ac.uk. Chuo pia kina sera yake kuhusu uendeshaji mbaya wa utafiti ambayo inaweza kupatikana kwenye waziri hii: http://www.lboro.ac.uk/admin/committees/ethical/Whistleblowing(2).htm.

Asante kwa kutumia muda wako kusoma fomu hii.

Kama utapenda kushiriki kwenye utafiti tafadhali saini fomu ya kukubali kushiriki iliyoambatanishwa hapa. Fomu hii ni ya kwako ubaki nayo.
Appendix 9: Participants Consent Form - Swahili

Utafiti kuhusu Upatikanaji wa Taarifa za Afya na Utumiaji wa Huduma za Kitaalamu za Afya na kwa Mama Wajawazito Chamwino Dodoma

FOMU YA KUKUBALI KUSHIRIKI KWENYE UTAFITI
(Ijazwe baada ya mshiriki kusoma Fomu ya Taarifa kwa Washiriki)

Nimeelezwa malengo na madhumuni ya utafiti huu. Naelewa kuwa utafiti umesanifiwa ili kuendeleza maarifa ya kisayansi na kwamba taratibu zote zimepitishwa na Kamati ya Maadili ya Utafiti wa Binadamu ya Chuo Kikuu cha Loughborough.

• Nimesoma na kuielewa Fomu ya Taarifa kwa Washiriki na Fomu hii ya kukubali kushiriki.
• Nimepata nafasi ya kuuliza maswali kuhusu ushiriki wangu kwenye utafiti.
• Naelewa kwamba silazimishwi kushiriki kwenye utafiti.
• Naelewa kwamba nina haki ya kujitoa kwenye utafiti wakati wowote kwa sababu yoyote na kwamba sitahitajiwa kutoa maelezo kwanini nimejitoa.

Nakubali kushiriki kwenye utafiti huu.

Jina lako__________________________________________
Sahihi yako ________________________________
Sahihi ya mtafiti ________________________________
Tarehe _________________________________________
Appendix 10: Focus Group Consent Letter

Centre for Information Management
Loughborough University, Leicestershire LE11 3TU
Phone: +255 715444 885: +44 7425810332

Dear Participant

I am writing to request you to participate in a focus group discussion that will take place at your community leader’s house. The purpose of the group is to discuss the current state of maternal health services, accessibility of maternal health information and challenges you face as a pregnant woman in your community. The information learned in the focus groups will be used to inform health planners when designing health interventions to promote rural pregnant women’s utilization of skilled services.

You will be in a group with 6 to 8 other pregnant women from your village. There are no right or wrong answers to the focus group questions. We want to hear many different viewpoints and would like to hear from everyone concerned. We hope you can be honest even when your responses may not be in agreement with the rest of the group. In respect for each other, we ask that only one individual speak at a time in the group and that responses made by all participants be kept confidential.

You can choose whether or not to participate in the focus group and stop at any time. Although the focus group will be tape recorded, your responses will remain anonymous. Your response and opinions are greatly appreciated.

I understand this information and agree to participate fully under the conditions stated above.

Signature: ........................................... Date: ...........................................

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Ndugu Mshiriki

Ninakuandikia kukuomba ushiriki kwenye mazungumzo ya pamoja ya kikundi yatakayofanyika nyumbani kwa mwenyekiti wa kijiji. Lengo la mazungumzo haya ni kujadili hali halisi ya huduma za afya ya uzazi na upatikanaji wa taarifa za afya pamoja na changamoto mbalimbali mnaokutana nazo kama mama wajawazito hapa kijijini. Taarifa zitakazopatikana zitatumika kusaidia watengeneza sera za afya kupanga jinsi ya kuboresha utoaji wa huduma na taarifa za afya na pia jinsi ya kuwafikia akina mama walio vijijini kirahisi.


Nimeelewa malengo ya mazungumzo haya na ninakubali kushiriki kikamilifu chini ya maelekezo yaliyotajwa hapo juu.

Sahihi: ................................. Tarehe: .................................

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Appendix 12: Pregnant Women’s Interview Guide

Personal Information

Age: ..................  Marital Status: .........................

Occupation: ..........................  Education Level: .....................

1. Maternal History

1.1. How many children do you have?
1.2. Where did you deliver your children?
1.3. If you did not (see 1) use the Health Facility (HF) for delivery, why did you seek help elsewhere and not at the health facility?
1.4. How many pregnancies have you had?
1.5. What happened to the other child/children?

2. Quality of Skilled Maternal Services

2.1. Of the following tests and services which one do you usually receive when you go to the ANC clinic?
2.1.1. Weight & Height measurement
2.1.2. Blood tests to check blood group, anaemia, hepatitis B virus, HIV, rubella susceptibility and syphilis.
2.1.3. Blood pressure and urine test
2.1.4. Iron, folic acid and vitamin D supplements
2.1.5. Stomach length and baby positions and heartbeats.

2.2. When you go for Antenatal/Postnatal Care clinics (anywhere), are you given any pregnancy-related health information? Can you give examples?
2.3. Of the following maternal health information which one you usually receive when you go to the ANC clinic?

2.3.1. Health information for nutrition and diet
2.3.2. Health information on pregnancy danger signs
2.3.3. Health information on labour and childbirth
2.3.4. Health information on family planning
2.3.5. Information on childbirth preparation
2.3.6. Information on childcare

3. Pregnant Women’s Perceptions on Maternal Health

3.1. Are you aware of any pregnancy-related danger signs?

3.1.1. Can you give three examples?

3.2. In your opinion, what is the effect these danger signs in mother’s and/or child’s health?

3.3. As a pregnant woman do you think you can develop any of the danger signs mentioned above? If yes, Why/ If not, Why not?

3.4. Do you know the recommended time to start ANC during pregnancy? If yes, when is that?

3.5. In the period prior starting ANC, where did you go for maternal care in case of any problem?

3.6. Are you aware of any family planning methods?

3.6.1. Can you give at least two examples?

3.7. What is your opinion on family planning methods?

3.8. Are you aware of any labour signs?

3.8.1. Can you give three examples?

3.8.2. Do you know what you are supposed to do when you experience any of the labour signs above?

4. What is your opinion on maternal services provided by the TBA?
5. **Pregnant Women’s Perceived Barriers of Skilled Maternal Health Services**

5.1. What is your opinion on maternal services provided at the HF?

5.2. You said (see 5.1) you are not satisfied with the health information provided at the HF, Why? What do you think could have been done to motivate you to fully utilize the skilled services?

5.3. In the current pregnancy, when did/do you intend to start ANC clinic? How old was/will your pregnancy be then?

5.4. What caused you to start ANC late than recommended?

5.5. If you were to decide the maternal health services you receive, what kind of services you would like to receive?

6. **Maternal Health Information and Cues to Action**

6.1. What is the media of communication you usually use to access the information (any) you need?

6.2. Do you think it can be used to deliver maternal health information you need? How?

6.3. If not, which type of media you would like to be used to deliver the health information to you?

6.4. The health information you receive, do you think it is sufficient and Helpful? How?

6.5. Have you ever experienced any of the pregnancy related danger signs? What did you do?

6.6. What was the outcome of the complication you experienced?

6.7. What do you think caused the problem?

6.8. If you were to decide the maternal health information you receive, what kind of information would you like to receive?

6.9. How frequent would you like to receive the health information?

7. **Social Norms and Healthcare Usage**

7.1. Have you ever been to any TBA?
7.2. What did you go there for?
7.3. When you go to the clinic does anyone accompany you to the clinic?
7.4. When you experienced a pregnancy related danger signs/complication,
    Who helped you to seek the help you needed?
7.5. How do you deal with day-to-day pregnancy-related complications/pains?
7.6 Do you have any thing about maternal health in your area that you would like to add?

THANK YOU FOR YOUR TIME AND COOPERATION!
Appendix 13: Pregnant Women’s Interview Guide- Swahili

Taarifa Binafsi
Umri: ..................     Hali ya Ndoa: ............................
Kazi: ............................     Elimu: ............................

1. Historia ya Uzazi
   1.1. Una watoto wangapi?
   1.2. Ulijifungulia wapi watoto wako?
   1.3. Kama hukutumia kituo cha afya wakati wa kujifungua, kwanini ulitafuta huduma hiyo mahali pengine na sio kituo cha afya?
   1.4. Umewahi kuwa na mimba mara ngapi?
   1.5. Nini kilitokea kwa mtoto/watoto wengine?

2. Ufahamu wa Mama Mjamzito kuhusiana na Afya ya Uzazi
   2.1. Je unafahamu dalili hatarishi yeyote wakati wa ujauzito?
      2.1.1. Unaweza kunipa mifano mitatu?
   2.2. Kwa mtazamo wako, nini madhara ya dalili hatarishi kwenye afya ya mama au/na mtoto?
   2.3. Kama mama mjamzito, unadhani dalili hatarishi ulizotaja hapo juu zinaweza kutokea kwako? Kama ndio kwanini/ Kama hapana, kwanini?
   2.4. Je Unafahamu wataalamu wa afya wanashauri uanze lini kuhudhuria kliniki ya wajawazito?
   2.5. Kama Ndiyo, je ni mimba ikiwa na umri gani?
   2.6. Je unafahamu njia zozote za uzazi wa mpango?
2.6.1. Unaweza kunipa mifano mitatu?

2.7. Una mtazamo gani juu ya njia za uzazi wa mpango?

2.8. Je unafahamu dalili za uchungu?
   2.8.1. Unaweza kunipa mifano mitatu?
   2.8.2. Unafahamu unatakiwa ufanye nini nini mara uonapo dalili za uchungu?

3. Upatikanaji wa huduma za kitaalamu za afya kwa mama wajawazito

   3.1. Kati ya huduma na vipimo vifuatavyo, ni vipi huwa unapewa unapohudhuria kliniki?
      3.1.1. Uzito na urefu
      3.1.2. Damu (ukimwi, kaswende).
      3.1.3. Presha na mkojo
      3.1.4. Unapatiwa vidonge vya vitamin D na madini chuma?
      3.1.5. Mapigo ya moyo ya mtoto na urefu wa tumbo.

   3.2. Kama ingekuwa ni juu yakvo kuamua ni taarifa gani za afya ya uzazi uwe unapokea, ungependa kupokea taarifa kuhusu nino hasa?

4. Upatikanaji wa Taarifa za Afya ya Uzazi

   4.1. Unapoenda kwenye kliniki ya wajawazito, huwa unapewa taarifa au elimu yeyote kuhusiana na ujauzito? Ni taarifa gani ambazo huwa unapewa?

   4.2. Kati ya hizi, ni taarifa gani za afya huwa mnapewa kwenye kituo cha afya?
      4.2.1. Taarifa za Afya kuhusu Chakula na Lishe
      4.2.2. Taarifa za Afya kuhusu dalili hatarishi za ujauzito
      4.2.3. Taarifa za Afya kuhusu uchungu na kujifungua
      4.2.4. Taarifa za afya kuhusu uzazi wa mpango
      4.2.5. Taarifa kuhusu maandalizi ya kujifungua
      4.2.6. Taarifa za afya kuhusu malezi ya watoto

   4.3. Kwa mtazamo wako, taarifa unazopewa kliniki huwa zinatosheleza na zinakusaidia? Kivipi?
4.4. Kama ingekuwa ni juu yako kama kuamua ni taarifa gani za afya uwe unapewa kliniki, ungependa wawe wanakupa taarifa gani hasa?

5. **Utumiaji wa Huduma za kitaalimu za Afya kwa Mama Wajawazito**

5.1. Kweneza ujuzito wako wa sasa, umeanza au unategemea kuanza lini kuhudhuria kliniki ya wajawazito?
5.2. Ujuzito wako ulikuwa/utakuwa na umri gani utakapoanza?
5.3. Nini kilisababisha uanze kliniki kwa kuchelewa kuliko inavyoshauriwa?
5.4. Kipindi kabla hujaanza kliniki, ulikuwa unapata wapi huduma za afya inapotokea una shida yeyote ya kiafya?
5.5. Wakati unaenda kliniki nani huwa anakusindikiza kliniki? Huwa unaacha watoto wengine na nani?
5.6. Imeshawahi kukuptokea dalili yeyote kati ya hizo ulizota ajabu hapo juu (angalia swali la 2.1)? Ulifanya nini?
5.7. Nani alikusaidia kutafuta huduma uliyoithihi?
5.8. Nini yalikuwa matokeo ya shida uliyopata?
5.9. Unadhani nini kilisababisha shida hiyo?
5.10. Unadhani kitu gani ambacho kama kingefanyika kwa ufanisi za idi kingeboresha matokeo ya shida ile?
5.11. Ni vipe unakabiliana na shida za kila mara zisababishwazo na ujuzito?

6. **Mtazamo wa kina Mama wajawazito kuhusu huduma za Kitaalimu za Afya ya Uzazi**

6.1. Una mtazamo gani juu ya huduma za afya zinazotolewa kwenyewe kituo cha afya?
6.2. Umesema hauridhishwi (swali la 6.1) na huduma zinazotolewa kwenyewe kituo cha afya, unadhani kuongeza na kurahisisha upatikanaji wa taarifa za afya kutaongeza utumiaji wako wa huduma za afya? Kivipi?
6.3. Imeshawahi kwenda kwa mkungu/mganga wa jadi?
6.4. Ulienda kufanya nini?
6.5. Una mtazamo gani juu ya huduma wanazotoa wakunga/waganga wa jadi?

7. **Njia za mawasiliano kwa taarifa za Afya**

   7.1. Huwa mnatumia njia gani kupata habari na taarifa mbalimbali?
   7.2. Unadhani njia hiyo/hizo zinaweza kutumika kufikisha taarifa za afya?
       Kivipi?
   7.3. Kama hapana, ungependa njia ipi itumike kufikisha taarifa za afya?
   7.4. Ungependa kupata taarifa za afya ya uzazi mara ngapi kwa mwezi?
   7.5. Kuna jambo lolote ungependa kuongeza?

*Nashukuru Kwa Muda na Ushirikiano Wako*
Appendix 14: Interview Guide for Nurses/Midwives

PREGNANT WOMEN’S ACCESS TO MATERNAL HEALTH INFORMATION AND ITS IMPACT ON HEALTHCARE UTILIZATION BEHAVIOUR IN RURAL TANZANIA

Personal Information

Age: ..................  Gender: .....................

Title: ..........................  Education Level: .....................

1. Working Environment

1.1. How long have you been working as a Nurse/Health worker?

1.2. How many hours do you work per day?

1.3. How many health staffs are there in the Health Facility (HF) you’re working in?

1.4. How many pregnant women do you attend per month? On average, how long does it take to attend a woman?

2. Pregnant Women’s Utilization of Maternal Health Services

2.1. How do you see pregnant women's utilization levels of skilled maternal services?

2.2. If it is low, what do you think causes low utilization of skilled maternal services?

2.3. For women who come here for ANC, how frequent do they come for service?

2.4. For pregnant women who do not come to the Health Facility, where do you think they go for maternal services?
2.5. Why do you think women go to Traditional Birth Attendants (TBA)/elsewhere for maternal services while the skilled maternal services are provided free of charge at the HF?

2.6. What is your opinion on TBAs and their services?

2.7. How can you describe the women who come to the HF in terms of
   a. Income
   b. Education
   c. Age

2.8. Why do you think the group you identified above are the main users of skilled services than their counterpart(s)?

2.9. What is the main parity group of the most pregnant women who come to the HF for ANC and delivery?
   a. First pregnancy
   b. Between 2 and 4 pregnancies
   c. More than 4 pregnancies

2.10. Why do you think the group you identified above are the main users of skilled services than others?

3. **Maternal Health Services Availability**

3.1. Do you have any specific opening and closing times for maternal services in your HF? If yes, what happens when a woman comes out of working hours?

3.2. When a pregnant woman comes for Antenatal Care (ANC) what kind of maternal services does she receive?

3.3. What are the recommended maternal services pregnant women required to receive? If providing less than recommended, why is that?

3.4. What is the average cost of maternal services including childbirth?
   3.4.1. How does it affect women’s utilization of services?
   3.4.2. How readily are women to pay for healthcare-related costs?

3.5. It shows that the requirement that a woman should come with her spouse in the first ANC clinic is the main cause of delay in starting ANC,
what do you think should be done to improve/change (alternative) the situation?

3.6. In your opinion, how could women’s utilization of skilled maternal services be improved?

4. Maternal Health Information Provision

4.1. When a pregnant woman comes for ANC what kind of maternal health information does she receive? How often do you provide the required information?

4.2. Do you think the health information you provide is sufficient and helpful? How?

4.3. Do you think providing pregnant women with more and easy access to maternal health information will improve their utilization of skilled services? How?

4.4. What is the media of communication you usually use to deliver maternal information to pregnant women?

4.5. Which other type of media you would like to use to deliver the health information to women?

4.6. Do you think it can be used as a media for health information communication? How? If not, why not?

4.7. What else do you think can be done to improve women’s access to maternal health information and utilization of skilled services?

5. Pregnancy Complications Management and Referrals

5.1. How often do you encounter pregnancy & childbirth related complications?

5.2. How do you deal with pregnancy-related complications?

5.3. What are the main causes of the pregnancy complications you mentioned in question 22?

5.4. In cases where referral is needed how fast is the process? If any delay what causes it?
5.5. What are the challenges you face in the referral process?
5.6. Do you think the referral process contributes to pregnant women’s utilization of skilled healthcare services?

Thank You for Your Time and Cooperation
Appendix 15: Interview Guide for Nurses/Midwives- Swahili

Taarifa Binafsi

Umri: ...............     Jinsia: ......................

Cheo: ..........................     Elimu: ...........................

1. Mazingira ya Kazi
   1.1. Ni kwa muda gani umefanya kazi kama muuguzi/Mhudumu wa afya?
   1.2. Huwa unafanya kazi kwa masaa mangapi kwa siku?
   1.3. Kuna wahudumu wangapi wa afya kwenye kituo cha afya unakofanyia kazi?
   1.4. Kwa wastani Huwa unahudumia wanawake wangapi wajawazito kwa mwezi? Huwa inachukua muda gani kumuhudumia mwanamke mmoja?

2. Utumiaji wa Huduma za Afya miongoni mwa wajawazito
   2.1. Unaonaje kiwango cha utumiaji wa huduma za afya miongoni mwa wajawazito?
   2.2. Kama hauridhishi, unadhani nini kinasababisha utumiaji hafifu wa huduma za afya?
   2.3. Kwa wanawake wanaokuja kwa ajili ya kliniki, ni mara ngapi huwa wanakuja kwenye marudio katika kipindi chote cha ujauzito?
   2.4. Kwa wale ambao hawafiki kituoni kwa ajili ya huduma, unadhani huwa wanaenda wapi kwa huduma za afya?
2.5. Unadhani nikwanini wanaenda kwa wakunga wa jadi au kwingineko wakati huduma za afya hutolewa bure kwenye zahanati?

2.6. Una mtazamo gani kuhusu huduma zinazotolewa na wakunga wa jadi?

2.7. Unaelezeaje wajawazito wanaotumia huduma za afya ukiangalia
   a. Kipato chao
   b. Elimu ya o

2.8. Kwanini unadhani kundi ulilolitaja hapo juu ndilo watumiaji wazuri wa huduma za afya kuliko wengine?

2.9. Ni kundi gani la akina mama wajawazito hutumia zaidi huduma za afya? Na kwanini?
   a. Ujauzito wa kwanza
   b. Ujauzito wa pili had wa nne
   c. Ujauzito wa tano na zaidi

2.10. Unadhani ni kwanini kundi ulilolitaja hapo juu hutumia zaidi huduma za afya kuliko wengine?

3. **Upatikanaji wa Huduma za Afya**

3.1. Je huwa kuna muda maalumu wa kufungua na kufunga kwa uutoaji wa huduma za afya kwenye zahanati yako? Kama ndio, inakuwaje pale ambapo mama anakuja nje ya muda huo wa huduma?

3.2. Mama mjuzito anapokuja kwenye kliniki, ni huduma gani huwa anapewa?

3.3. Kisheria, mama mjuzito anatakiwa apewa huduma gani anapokuja kliniki? Kama mnatoa huduma pungufo ya zinazoshauriwa, nini kinasababisha hali hiyo?

3.4. Kwa wastani, huduma za afya pamoja na kujifungua huwa zinagharimu kiasi gani? Gharama hizo zina uhusiano wowote na utumiaji wa huduma za afya miongoni mwa mama wajawazito?

3.5. Kina mama wajawazito wana utayari kiasi gani kulipia gharama hizo?
3.6. Inaonekana kuwa sharti la kutaka mama aje na mwenzi wake kwenye kliniki ya kwanza ni mojawapo ya sababu zinazoleteleza wamama kuchelewa kuanza kliniki, unadhani nini kifanyike ili kupunguza tatizo hili?

3.7. Kwa mtazamo wako, ni jinsi gani utumiaji wa huduma za afya miongoni mwa wajawazito unaweza kuongezwa/kuboreshwa?

4. **Utoaji wa Taarifa Afya kwa Mama Mjamzito**

4.1. Mama mjamzito anapokuja kwenye kliniki, ni taarifa gnai za afya ambazo huwa anapewa? Huwa mnatoa huduma hizi mara ngapi katika kipindi chotecha ujauzito?

4.2. Unadhani taarifa za afya mnazotoa zinakidhi mahitaji na zinawasaidia? Kwa vipi?

4.3. Unadhani kuongeza na kurahisisha upatikanaji wa taarifa za afya kwa mama wajawazito kunaweza kuongeza utumiaji wa huduma za afya? Kwa vipi?

4.4. Huwa mnatumia njia gani kufikisha taarifa za afya kwa mama wajawazito?

4.5. Ni njia gani nyingine mngependa kutumia kufikisha taarifa za afya kwa mama wajawazito?

4.6. Unadhani inaweza ikatumika kama njia ya mawasiliano kufikisha taarifa za afya? Kivipi? Kama hapana, kwanini?

4.7. Nini kingine unadhani kifanyike ili kuongeza upatikanaji wa taarifa za afya na utumiaji wa huduma za afya?
5. **Matatizo ya Mimba na Rufaa**

5.1. Ni mara ngapi huwa unakutana na mimba zenye matatizo au kina mama wenyewe shida wakati wa kujifunga?

5.2. Huwa unafanyaje unapokutana na kesi kama hizo?

5.3. Nini hasa huwa chanzo cha matatizo yatokanayo na ujauzito uliyotaja kwenye swali la 22?

5.4. Inapotokea mama anahitaji kupewa rufaa, huwa inachukua muda gani hadi mama kuchukuliwa na kufikishwa kwenye kituo husika? Kama kuna uchelewaji, nini kinasababisha ucheleweshaji huo?

5.5. Ni changamoto gani mmakutana nazo wakati wa kufanya rufaa?

5.6. Unadhani rufaa zinachangia kwenye utumiaji mdogo wa huduma za afya miongoni mwa mama wajawazito?

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**Nashukuru Kwa Muda na Ushirikiano Wako**
Appendix 16: Interview Guide for Traditional Birth Attendants

Village: ____________________________  ID: ____________

Personal Information

Age: ..................  Gender: ......................

Occupation: .....................  Education Level: ............

1. Working Experience and Skills

1.1. How long have you been working as a TBA?

1.2. How did you become a TBA? Were you trained?

1.3. Who trained you and for how long?

1.4. How many TBAs are there in your village?

1.5. How many pregnant women do you attend per month? On average, how long does it take to attend a woman?

1.6. Are you a member of any Traditional Healer's Association? If yes, which one?

1.7. Why do you/ do you not belong to any of the Traditional Healer's Association? What are the benefits and disadvantages
2. **Pregnant Women’s Utilization of Maternal Services**

2.1. How can you describe most of the women who come to you in terms of
   a. Income
   b. Education
   c. Age

2.2. Why do you think the group you identified above are the main users of your services than their counterpart(s)?

2.3. What is the main parity group of the most pregnant women coming to you for maternal care and delivery?
   a. First pregnancy
   b. Between 2 and 4 pregnancies
   c. More than 4 pregnancies

2.4. Why do you think the group you identified above are the main users of your services than others?

2.5. For women who come here for maternal care, how frequent do they come for services?

2.6. Why do you think women come to you for maternal services instead of going to the Health facilities where services are free?

2.7. What is the average cost of maternal services you provide including childbirth? Do you think it’s related to the women’s usage of maternal services? How exactly?

2.8. What is your opinion on maternal services provided at the Health Facility?

2.9. What are the benefits of/ problems with maternal services provided at the Health Facility?

2.10. Do you usually advise women to go to the HF for maternal services? Why/Why not?

2.11. If you answered yes above, in your opinion, how could women’s utilization of skilled maternal care be improved?

2.12. Which category best describe your monthly income from services as a TBA? Is this your only source of income?
2.13. How far away does your farthest customer live?
2.14. Do you think distance is important when people choose where to go for health services? How?

3. Availability of Maternal Services and Health Information
3.1. Do you have any specific opening and closing times for maternal services? If yes, what happens when a woman comes out of your working hours?
3.2. Do you visit pregnant women at their homes? How often?
3.3. What kind of services do you provide to pregnant women when they come for maternal care?
3.4. When a pregnant woman comes for maternal services what kind of health information does she receive?
3.5. Do you think the health information you provide is sufficient? And helpful?

4. Pregnancy Complications Management and Referrals
4.1. How do you detect a pregnant woman having pregnancy complications? Can you give examples of pregnancy danger signs?
4.2. How do you deal with pregnancy complications?
4.3. How often do you encounter pregnancy & childbirth related complications? Can you mention the most common type of complication(s)?
4.4. What do you think causes pregnancy complications you mentioned above?
4.5. When you detect pregnancy complication or when complications arise during childbirth that you cannot handle, what do you do?
4.6. Is there anything else you would like to add?

Thank You for Your Time and Cooperation!
Appendix 17: Interview Guide for Traditional Birth Attendants-
Swahili

Taarifa Binafsi

Umri: ..................     Jinsia: .....................
Kazi: .....................     Elimu: .................

1. Mazingira ya Kazi na Uzoefu

1.1. Ni kwa muda gani umefanya kazi kama Mkunga wa jadi?
1.2. Ulipataje kuwa Mkunga wa jadi? Ulifundishwa?
1.3. Nani alikufundisha na kwa muda gani?
1.4. Kuna wakunga wa jadi wangapi kwenye kijiji chako?
1.5. Huwa unawahudumia wajawazito wangapi kwa mwezi? Kwa wastani,
inachukua muda gani kumuhudumia mama mjamzito mmoja?
1.6. Je wewe ni mwanachama wa chama chochote cha watoa Tiba Asili? Kama
    ndio, chama gani/ kama sio, kwanini?
1.7. Nini faida na hasara za kuwa mwanachama wa vyama vya Tiba Asili?

2. Utumiaji wa Huduma za asili kwa Mama Wajawazito

2.1. Unaelezeaje wengi wa akina mama wanaotumia huduma zako kwa
    a. Kipato chao
    b. Kiwango cha elimu
    c. Umri

Village: [ ]
ID: [ ]

Village: [ ]
ID: [ ]

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2.2. Kwanini unadhani kundi ulilolitaja hapo juu wanatumia Zaidi huduma zako kuliko wengine?

2.3. Ni kundi gani la akina mama wajawazito wanaokuja sana kwako kwa huduma za uzazi na kujifungua?
   a. Ujauzito wa kwanza
   b. Ujauzito wa 2 hadi wa 4
   c. Zaidi ya ujauzito wa 4

2.4. Kwanini unadhani kundi ulilolitaja hapo juu wanatumia Zaidi huduma zako kuliko wengine?

2.5. Kwa akina mama wanaokuja kwako kwa huduma za uzazi na ujauzito, huwa wanakuja mara ngapi kwa mwezi?

2.6. Kwanini unadhani akina mama hao huja kwako kwa huduma badala ya kwenda zahanati ambako huduma hutolewa bure?

2.7. Kwa wastani huduma zako pamoja na kujifungua huwa zinagharimu kiasi gani? Unadhani ina uhusiano na chaguo na utumiaji wa huduma hizo? Kivipi?

2.8. Una mtazamo gani juu ya huduma za afya kwa mama wajawazito zitolewazo kwenye zahanati?

2.9. Kuna faida na matatizo gani kwenye huduma za afya zitolewazo kwenye zahanati?

2.10. Huwa unawashauri kina mama wajawazito kwenda kwenda kwenye zahanati kwa huduma za afya (Kama ndio, kwanini/?Kama sio, kwanini?

2.11. Kama umejibu ndio kwenye swali lililopita, unadhani nini kifanyike ili kuhamasisha utumiaji wa huduma za kitaalamu za afya?

2.12. Ni kiwango gani cha pesa huwa unapata kutokana na kazi yako kama Mkunga wa jadi? Je hii ukungwa wa jadi ndio chanzo chako pekee cha kipato
   a. Chini ya TSh 50,000
   b. Kati ya TSh 50,000 mpaka 100,000
   c. Kati ya TSh 100,000 mpaka 200,000
d. Sina hakika

2.13. Mteja wako wa huduma za uzazi aliyetoka mbali zaidi, alitoka wapi?


3. Upatikanaji wa Huduma za Ujauzito na Taarifa za Afya

3.1. Je huwa una muda maalumu wa kufungua na kufunga utoaji wa huduma? Kama ndio, inakuaje pale inapotokea mama mjambito amekuja wakati umefunga?

3.2. Huwa unawatembelea kina mama majumbani mwao? Mara ngapi?

3.3. Ni huduma gani huwa unawapa kina mama wajawazito wanapokuja kwako?

3.4. Je, huwa unatoa ushauri na taarifa za afya kwa akina mama wanpokuja kwako?

3.5. Huwa unawapa taarifa gani zaidi?

3.6. Unadhani ushauri na taarifa za afya unazowapa zinatosha? Zinawasaidia?

4. Udhibiti wa Matatizo ya Ujauzito na Rufaa

4.1. Huwa unatambuaje kama mama mjambito ana mimba yenye matatizo? Unaweza kunipa mifano mitatu ya dalili hatarishi za ujauzito?

4.2. Huwa unafanyaje unapokutana na mama mwenye mimba yenye matatizo?

4.3. Ni kwa kiasi gani huwa unakutana na wajawazito wenye mimba zenye matatizo? Unaweza kuniambia aina ya matatizo ambayo wajawazito wengi wanakuwa nayo?

4.4. Unadhani ni nini kinasababisha aina hiyo ya matatizo uliyoyataja hapo juu?

4.5. Unapogundua tatizo kwenye mimba au tatizo linapojitokea wakati ukimsaidia mama kujifungua, tatizo ambalo huwezi kulidhibiti huwa unafanyaje?
4.6. Je una jambo lolote ungependa kuongezea?

Nashukuru Kwa Muda na Ushirikiano Wako