DETERMINANTS OF ACCESS TO SKILLED BIRTH ATTENDANTS BY WOMEN IN GALKACYO DISTRICT, SOMALIA

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February, 2018
DECLARATION
This thesis is my original work and has not been presented for a degree in any other University.

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This study is dedicated to my best friend Abdirahman Ali Jama, my beloved mother Aisha Mohamed Ali and to my lovely wife Deeqa Jama for their durable support.
ACKNOWLEDGEMENT

First and foremost, I must thank the Allah\God who mercifully simplified me to do this work.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC: Antenatal Care
APHRC: African Population and Health Research Centre
SBAs: Skilled Birth Attendants
DFID: Department for International Development
EDHS: Ethiopian Demographic and Health Survey
FGM: Female Genital Mutilation
KDHS: Kenya Demographic Health Survey
MDG: Millennium Development Goal
MNH: Maternal and New-born Health
MOH - Ministry Of Health
PPH: Post-Partum Hemorrhage
SBAs: Skilled Birth Attendants
TBAs: Traditional Birth Attendants
UN - United Nations
UNFPA - United Nations Population Fund
UNICEF - United Nations Children’s Fund
WHO - World Health Organization
DEFINITION OF OPERATIONAL TERMS

Maternal Death/Mortality

A maternal death is defined as the death of a woman while pregnant or within 42 days of termination of the pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Maternal Mortality Ratio

The maternal mortality ratio is the number of maternal deaths per 100,000 live births.

Maternal Morbidity

Maternal morbidity is any symptom or condition resulting from or made worse by pregnancy. In developing and developed countries alike, there are 12 to 16 serious maternal complications to each maternal death.

A Skilled Attendant

It refers to “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 the immediate postnatal period, and in the identification, management or referral of complications in women and newborns”.

Traditional birth attendants (TBAs) either trained or not, are excluded from this category of skilled health workers (WHO, 2004).
Skilled Attendance

World Health Organization (2004) defines skilled attendance as the process by which a pregnant woman and her infant are provided with adequate care during labour, birth, and the postnatal period, whether the place of delivery is the home, health centre, or hospital. In order for this process to take place, the attendant must have the necessary skills and must be supported by an enabling environment at various levels of the health care system, including a supportive policy and regulatory framework; adequate supplies, equipment, and infrastructure; and an efficient system of communication and referral/transport.

Traditional birth attendant (TBA)

TBA is a community-based provider of care during pregnancy and childbirth. TBAs are not trained to proficiency in the skills necessary to manage or refer obstetric complications. TBAs are not usually salaried, accredited members of the health system.
ABSTRACT

Globally over half million women of reproductive age (15-49 years) die every year as result of pregnancy and childbirth complications, and 300 million women endure from debilitating injuries. The lack of availability and access to basic and obstetric emergency care is a major cause of the high levels of maternal mortality and morbidity in Somalia. Barriers to accessing skilled birth attendant services are many as reflected, in Somalia only one out of 6 women receive the appropriate care. WHO report states during 2011, 55.5%, of pregnant mother preferred to deliver at homes instead of health facilities and the availability and accessibility of traditional birth attendants influenced their choices. The main objective of this study was to investigate the determinants of access to skilled birth attendants by women in Galkacyo district, Somalia. The specific objectives were to determine the proportion of women accessing to skilled birth attendants, to investigate demographic characteristics, socio-cultural practices, and socio-economic factors that influence access to skilled birth attendants by women in Galkacyo district, Somalia. This study was descriptive cross-sectional. The study was conducted in Galkacyo district, Puntland, Somalia. The target population of this study was women of reproductive age (15-49 years). In this study administered questionnaires was used to collect data from the respondents while key informants interview was done to find overall picture on access to SBAs. Purposive sampling was used to select key informants. Convenience sampling was used in this study to select 384 respondents who met inclusion criteria. Informed consent was obtained from the study participants. SPSS version 20 was used for data analysis. After entry, cross tabulation was done followed by chi square statistics to get the independent variables that were significantly associated with access to skilled SBAs. Logistic regression was used to generate odds ratios on the variables that were significant at chi square level. Information generated was then presented in forms of text, tables and graphs. Qualitative data was analyzed using content analysis based on key themes generated from the objectives. This study found that low proportion of women (27%) had access to skilled birth attendants in Galkacyo district, Somalia (27%) of respondents delivered with assistance of skilled birth attendants. The following factors were significantly associated with access to skilled birth attendants in the study area: Respondents level of education (OR=10.11; 95% CI: 4.8 – 21.28; p<0.001). Marital status (OR=0.23; 95% CI: 1.11 – 0.46; p<0.001). Husband's level of education (OR=4.99; 95% CI: 2.285 – 10.90; p<0.001). Decision maker about delivery (OR=0.15; 95% CI: 0.03 – 0.66; p=0.012). Respondent's occupation (OR=3.17; 95% CI=1.52-6.62; P= 0.002). Husband's occupation (OR=2.69; 95% CI: 1.02-7.09; P=0.046). Household's monthly income (OR=0.20; 95% CI: 0.11-0.37, P<0.001). This study recommends that there is need to upgrade educating young girls, so that they enable to make informed choice for their health outcomes. To overcome socio-cultural practices influencing access to SBAs, MOH should increase community health education. Women should be economically improved as to enable them access to higher quality of services including delivery care, more jobs should be created for women.
CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Though pregnancy and childbirth are natural phenomenon, and it is often an eventful process (WHO, 2004), Globally over half million women of reproductive age (15-49 years) die every year as a result of pregnancy and childbirth complications, and 300 million women endure from debilitating injuries (Rashid, et, 2009). Millennium Development Goal (MDG) five concentrates on improving the health of mothers, with target 5 aiming to reduce maternal mortality ratio by three quarters by 2015, On the other hand MDG four aims at reducing child deaths by two third by the year 2015.

Availability of Skilled Birth Attendants (SBAs) is one of the most important strategies to reduce maternal and neonatal mortality rates (WHO, 2004). Globally one third of births occur at homes without the assistance of Skilled Birth Attendants (WHO, 2008). In developing regions, Consequently two million women died in Africa during childbirth since 2000 (UN, 2007). Lawn et al (2009). In developed countries, WHO estimates skilled birth attendance to have reached 99.5%. Africa, less than 50% of births are performed by SBAs (WHO, 2006). However, increasing the percentage of births performed by Skilled Birth Attendants could help reducing maternal and neonatal mortality rates (Graham, et, al, 2001).

Many researchers documented that more than three-fourths of maternal deaths are related to direct obstetric causes, which are easily preventable and treatable, and 77% of deaths occur during or soon after childbirth within 24 hours (UNICEF, 2009).

In Somalia, the combination of conflict, insecurity, mass displacement, recurrent droughts, floods and extreme poverty coupled with very low basic social service
coverage, two decades of internal conflict and collapsed health sector had left 80% of Somalia's population without access to basic health services and Prospect of giving birth in the presence (UNFPA, 2009). One in 19 pregnancies ended with the mother dying. MDG health related indicators concerning Somalia are among the worst in the world (WHO, 2006). Maternal deaths in Somalia are currently estimated at 1,400 per 100,000 live births, Most causes of maternal deaths are hemorrhage, obstetric in labour, unsafe abortions and infections (WHO, 2004). This worried deterioration trends of maternal deaths is thought to be due to absences of SBAs and the use of traditional birth attendants who lack the required skill (WHO, 2010). Skilled delivery care service utilization in Somalia is still far below any acceptable standards only 6% of women receive assistance from skilled birth workers either at homes or at health institutions (UNICEF, 2011). In order to ensure that women remain safe during childbearing years, it is vital that a competent health worker with midwifery skills be present at every birth. In Somalia, the majority of births (55.9 percent) take place with the help of Traditional Birth Attendants (TBAs), who often lack training on how to manage birth complications. Conversely, only 3.4 percent of deliveries are handled by medical doctors, 9.4 percent are assisted by family members, and 25.4 percent are aided by nurses and midwives (UNICEF, 2009).

1.2 Problem Statement

In sub-Saharan Africa, maternal and child health remain a big challenge, with maternal mortality estimates still as high as 1000 deaths in 100,000 live births in some countries (APHRC, 2006).
The lack of availability and access to basic and obstetric emergency care is a major cause of the high levels of maternal mortality and morbidity in Somalia. (WHO, 2004). Barriers to accessing skilled birth attendant services are many as reflected in only one out of 6 women receive the appropriate care. (WHO, 2004), Poor literacy levels and lack of health facilities are the major contributors to worsening maternal and neonatal mortality rates in Somali, and most of pregnant women are at greater risk due to lack of awareness of the need to deliver with presence of SBAs (UNICEF, 2014). WHO report states during 2011, 55.5%, of pregnant mother preferred to deliver at homes instead of at health facilities and the availability and accessibility of traditional birth attendants influenced their choices (WHO, 2010). Furthermore it has been observed that the access to skilled birth attendant services could reduce MMR and NMR. (UNICEF, 2015).

While the country has been in conflict for the last 25 years. The greatest risk to women's lives is not war but birth (TROCAIRE, 2011) Maternal mortality ratio in Somalia shockingly reflects how years of conflicts have resulted in virtually all basic facilities such as referral hospitals, maternal and child health (MCH) facilities and services being damaged or totally destroyed. Only 6% of all births are attended by skilled birth worker. (UNICEF, 2011).

The major constraints that hinder midwives to practice lifesaving skills are unavailability of medicines, supplies and equipments (World's midwifery report, 2011). Utilization of services in combination with cultural and economic issues which influence acceptability of certain services hinder access to delivery services (Magadi, 2004).
The level of education of mothers has been shown repeatedly to be positively associated with access to services of SBAs at delivery (Addai, 2000). Whether these factors influenced the access to skilled birth attendants by women in Galkacyo district was the subject of this study.

1.3 Justification of the study

Skilled attendance at birth is crucial for decreasing maternal and neonatal mortality, This study was important in the context of current efforts to address poor maternal and child health outcomes in Africa. Given the demonstrated health benefits of institutional deliveries and the fact that no similar studies had been carried out in this area before. It was necessary to understand the range of factors associated with the decision to seek care during delivery. The findings of this study was useful as a guide to develop effective maternity services and call immediate interventions from international NGOs, LNGOs and MOH for enhancing the accessibility of skilled birth attendant services. This study strived to identify why the majority of women continue delivering at homes without the assistance of SBAs.

1.4 Research questions

1. What proportion of women in Galkacyo district have access to skilled birth attendants?

2. What are the demographic characteristics that influence the access to skilled birth attendants by women in Galkacyo, district, Somalia?.

3. What are the socio-cultural practices that influence the access to skilled birth attendants by women in Galkacyo district, Somalia?.
4. What are the socio-economic factors that determine the access to skilled birth attendants by women in Galkacyo district Somalia?

1.5 Null Hypothesis

1. Demographic characteristics do not influence access to skilled birth attendants by women in Galkacyo district, Somalia.

2. Socio-cultural practices do not influence access to skilled birth attendants among women of reproductive age in Galkacyo district, Somalia.

3. Socio-economic factors do not influence access to skilled birth attendants among women of reproductive age in Galkacyo district, Somalia.

1.6 Objectives

1.6.1 Broad objective

The broad objective of this study was to investigate the determinants of access to skilled birth attendants by women in Galkacyo district, Somalia.

1.6.2 Specific objectives

The specific objectives of this study were to:

1. Determine the proportion of women accessing the services of skilled birth attendants in Galkacyo district, Somalia.

2. Establish the influence of demographic characteristics on access to skilled birth attendants by women in Galkacyo district, Somalia.

3. Investigate the influence of socio-cultural practices on access to skilled birth attendants by women in Galkacyo district, Somalia.

4. Determine the influence of socio-economic on access to services of skilled birth attendants by women in Galkacyo district Somalia.
1.7 Significance and Anticipated Output

The beneficiaries of this study were the women of reproductive age and their newborns who do not access to services of skilled birth attendants, this study was important in the context of current efforts to address the unacceptable high maternal and neonatal mortality rates in Africa especially in sub-Saharan Africa. It would contribute the improvement of pregnancy, delivery and postnatal care during childbearing process.

Ministry of health of Puntland(The semi-regional autonomy of north-east of Somali), and Ministry of Health of federal government of Somalia would benefit from the study, Also international non-governmental organizations (INGOs) and local non-governmental organizations(LNGOs) would use the findings of this study to get funds from donors, that will lead immediate interventions at reducing the complications at childbirth and to ensure that 80% of births are assisted by skilled health personnel..

1.8 Limitations and Delimitations

**Limitations:** This study was carried out in Galkacyo district which is urban setting, it lacks the comparison of rural setting where most dangerous complications occur at childbirth. This limits the concept of the study to both urban and rural setting populations. The financial resources were limited as research was funded by researcher.

The study outcome depended on the openness and truthfulness of the respondents as study required first hand information from them.

**Delimitations:** Coping mechanism were developed by researcher to overcome all the limitations that surrounded the study. Financial resources were covered by the
researcher. The study results put on light the access and utilization of skilled birth attendants. The study findings can be replicated to all other urban communities in the country. The interventions addressing maternal and neonatal deaths would increase after research comes up with reliable findings.

1.9 Assumptions of the study

This study assumed that respondents would actively take part and provide true information. The study would be unique and the first one being conducted about the access to SBAs by the women of reproductive age in Galkacyo district, Somalia.
1.10 Conceptual framework

This study was based on a conceptual framework that shows the associations among variables as shown below figure 1.1

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variables</th>
</tr>
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<tbody>
<tr>
<td>Demographic characteristics</td>
<td>Access to Skilled birth attendants</td>
</tr>
<tr>
<td>• Age</td>
<td></td>
</tr>
<tr>
<td>• Marital status</td>
<td></td>
</tr>
<tr>
<td>• Level of education</td>
<td></td>
</tr>
<tr>
<td>Socio-cultural factors</td>
<td></td>
</tr>
<tr>
<td>• Cultural beliefs towards accessing SBAs,</td>
<td></td>
</tr>
<tr>
<td>• Attitude towards SBAs and delivering at hospital</td>
<td></td>
</tr>
<tr>
<td>• Religion</td>
<td></td>
</tr>
<tr>
<td>Economic factors</td>
<td></td>
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<tr>
<td>• Income</td>
<td></td>
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<tr>
<td>• Transportation</td>
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<td>• Employment</td>
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</tbody>
</table>

Adopted by Andersen 199 and Amooti-kaguna & Murwaha 2000
1.10.1 Brief description of Conceptual framework

The determinants of access to skilled birth attendants can be categorized under demographic characteristics, socio-cultural practices, socio-economic factors and health care system factors such accessibility, availability and the attitude of health workers. High cost for delivery leads women of low socio-economic status not to access to health facilities (Andersen, 1995). In Somalia most women in resource strained settings are not able to pay the fees of healthcare services including delivery (UNFPA, 2009). Individual factors such low level of education, age, parity and attitude influence the access to services of skilled birth attendants. Transportation always depends on infrastructure and road network. In Somalia poor roads are the major challenge of transaction and it increases the cost of transportation.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The literature review is discussed in the sections related to the study objectives that provided basis for comparative analysis.

This establishes facts about skilled birth attendance and benefits of delivering at health facility. It discusses the extent of skilled birth attendance on global, Sub-Saharan Africa and Somali perspectives.

This study reviews the existing literatures on determinants of access to skilled birth attendant services. This provided evidence base, comparison and interpretation of findings for this study. And lastly summarizes the literature review and recognize the gaps.

2.2 General idea of skilled birth attendance

Skilled birth attendant is a midwife, physician, obstetrician, nurse, or other health care professional who provides basic and emergency health care services to women and their newborns during pregnancy, childbirth and the postpartum period. Birth attendants are trained to be present at (“attend”) childbirth, whether the delivery takes place in a health care institution or at home,(WHO, 2013)

Skilled birth attendance had been defined as a corporation of skilled birth attendants and enabling environment of equipment, supplies, drugs and transport to emergency obstetric care, The political, policy, and socio-cultural environment can also lead or prevent skilled attendance, (DFID, 2005). Skilled attendance at all births is considered to be one of the most important intervention for ensuring safe motherhood, because it
accelerates the timely delivery of emergency obstetric and newborn care when serious complications arise (WHO, 2004).

Delivery with presence of skilled birth attendant can help prevent infections through the practice of safe procedures and good hygiene during childbirth and enable managing the obstetric complications if assisted by functioning health system (Akhter and Wohab, 2008). Unavailability of appropriate hygiene at the time of delivery may cause complications that increases the risk of death of the mother, child or both (Rogan and Olvena, 2004). The researches of Rogan and Olvena show that the SBA serve as indicator of progress towards maternal death across the world, and they agreed that the risk of childbearing can be reduced through well nourishing and maintaining health of mother before she conceives the pregnancy and assistance from skilled birth attendant at child birth.

2.2.1 Global perception on Skilled Birth Attendance

Every year around 287,000 maternal deaths occur worldwide, for each maternal death 20 women suffer from injuries or disabilities related to pregnancy/childbirth, and approximately 3 million neonates die each year across the world. Greatest mortality risk for both mothers and children occur during delivery and immediately after birth (Join statement by WHO, ICM and FIGO, endorsed by UNFPA and the Word Bank, 2004) Globally one third of births take place without assistance of SBA and most of deliveries occur outside health facility and, more than 60 million births are performed by unskilled attendants or nobody at all (DFID, 2005).
The presence of skilled birth attendants during delivery is crucial in reducing maternal deaths. One of the most critical interventions for safe motherhood is to ensure that all births are attended by skilled healthcare worker and availability of transport to referral facility for obstetric in case of emergency (UNICEF, 2009) Developing countries moderate progress from 55% in 1990 to 65% in 2009, Sub-Sahara Africa and southern Asia substantially progressed but more needs to be done as the majority of maternal deaths occur in these regions (Liliana Carvajal, 2009.)

Many studies had been carried out in several countries on the access to maternal health services, in Yemen only 22% of births are assisted by skilled birth attendants with a total of 77% of deliveries occur at home, therefore it means that most of births are attended by untrained provider (Kempe, et al., 2011). Pathak study (2010) shows that the access and utilization of skilled birth attendants in India increased from 36.2% in 1992-1993 to 49.5% in 2005-2006. The study found that use of SBAs remained considerably lower among poor mothers relative to their non poor counterparts. The WHO strongly advocates for skilled care at every delivery to reduce global burden of 358,000 maternal deaths, 3million stillbirths and 3.7 million neonatal mortality each year, through extended coverage of skilled birth attendants.

The proportion of women who deliver at health facility with assistance of skilled birth attendants is one of indicators in meeting the fifth MDG, The most countries where health professionals attend more than 80% of births, MMR is below 200 per 100,000 live births,(WHO,2008)
2.2.2 Access to skilled birth attendants in Sub-Saharan Africa

One of objectives of the united nations millennium development goals (MDGs) was to reduce maternal mortality rate by average of 5.5% every year over the period 1990-2015 (WHO, 2007). At the global level, MMR decreased less than 1% per year between 1990-2005 far below 5.5% to reach the target of MDG 5, Some countries have made progress towards millennium development goals(MDG) five (UNFPA,2008), But most sub-Sahara African regions have not improved, and not on track for meeting the expected targets pertaining to maternal death ratio. Recent estimates show that the average annual rate of reduction in MMR in sub-Sahara African countries is less than 1% (UNICEF,2007), Research findings from sub-Saharan Africa show that only 15-30% of women access and receive skilled care at childbirth, They suggest that there are wide variation between rural and urban settings (Canavan, 2009).

Ethiopia EDHS (2011) shows that there is no difference between maternal mortality rates , after seven year period proceeding survey, MMR was 676 in 2005 and 673 in 2011, In Ethiopia , the proportion of deliveries attended by skilled health worker are very much lower than other regions in Sub-Sahara Africa, only 6% of births occur at health facility with assistance of skilled birth attendants(Ahmed,a,2010).

In Kenya, maternal mortality remains high at 488 per 100,000 live births, while this is below the sub-Saharan average of 640 deaths per 100,000 live births (KDHS, 2008-09). 56% of Kenyan women deliver at home, the most of these births occur in rural areas, only 44% of deliveries are attended by skilled birth attendants
The importance of skilled attendance at delivery has long been recognized at the reducing of unacceptable high rates of maternal and neonatal deaths in Sub-Saharan Africa, and all over the world (WHO, 2009)

2.2.3 Access to Skilled Birth Attendance in Somalia

Somalia has been defined as one of the worst places to be as woman, Maternal mortality rate stands at above 1000 per 100,000 live births (WHO, 2014). The rate reflects how years of conflict have resulted virtually all basic facilities such as referral hospitals, maternal and child health facilities and services being damaged or totally destroyed, One in ten Somali children dies before his/her first birthday (UNICEF, 2010) Assistance at child birth is decisive for the outcome and health of both mother and newborn,

In Somalia, there is a major lack of health facilities able to handle basic emergency obstetric care, and terrible shortage of qualified SBAs (UNFPA, 2009). Barriers of accessing skilled birth attendants such Low awareness among the women of beneficial effect, financial obstacles in the form of user fee and expensive transport, and poor quality of maternal health services are the major challenges restricting women to utilize the SBA care at childbirth (WHO, 2009) Also there is a weak basis for governance, with weak structures and political will, as a result, projects are donor or NGO- driven and in many cases demonstrating a random approach to maternal health services rather than considering and aligning them according to strategy and needs,(UNICEF, 2008) Two decades of internal conflict and collapsed health sector had left 80% of Somalia's population without access to basic health services and Prospect of giving birth in the presence of SBAs. One in 14 pregnancies ended with the mother dying (WHO 2010). A strategy essential to reducing the high maternal
mortality rate is to ensure that all (100%) births are assisted by skilled birth attendants. Access to skilled delivery care service in Somalia is still far below any acceptable standards, only 6% of women receive assistance from skilled birth workers either at home or at health institutions (UNICEF, 2011). The majority of death and disabilities among women of reproductive age in Somalia is related to pregnancy and childbirth, optimal pregnancy care depends on all levels of the health systems from preventive services up to attendance of birth by skilled health worker (WHO, 2007).

Traditional harmful practices influence negatively a maternal health outcomes, most Somali communities continue traditional practices even though they have realized how bad they are to the health and well-being of women and girls at childbirth. The most two awful practices are early marriage and female genital mutilation (FGM), both have a direct impacts on women during pregnancy and childbirth, FGM causes obstetric complications such prolonged and difficult labour, early marriage forces young girls to dropout of schools and lead to lack of employment (poor socio-economic) or poverty, all these affect the health seeking behavior and may decrease access to skilled birth attendant services at delivery.

2.3 Demographic factors that influence access to Skilled Birth Attendants

Access and utilization of delivery care services is influenced by demographic factors such as age, age is one of the important characteristics that affects the health seeking behavior of the mother (UNFPA, 2008). Lower access and utilization of skilled birth attendants was observed among women who were above 35 years of age (Bell, et al., 2003). This finding was consistent with the findings of other studies (Wanjira et al., 2011) Young mothers are likely to seek delivery care from SBAs than old mothers, family and relative may give more attention to the type of parity, Births to older
women are more likely to occur with no assistance compared with births to younger women (KDHS, 2008/09).

Level of education of mother affects on health seeking behavior and it enhances rapport with husband and other family members, It also helps to make personal decision confidentially (Singh et al., 2012). Moore, et al., 2011 in his study in Nigeria found that maternal education plays a significant role to accessing and utilizing the delivery care services. Low level of education and awareness reduce the need for SBA, Mother relies on delivering at home instead of health facility (Olven, 2004).

Access to a skilled birth attendant (SBA) is critical for improving the health of mother and newborn both (WHO, 2009).

2.3.1. Socio-cultural Factors influencing access to SBAs

One of the major maternal health challenges facing women at childbearing period is the dominance of socio-cultural and traditional practices (Tim Ensor & Cooper, 2004). Socio-cultural factors enable or prevent women to access and utilize skilled birth attendant care, (DFID, 2005). Social and cultural norms that place women at a lower status than men restrict their political commitment which is necessary for improving the human resources and systems essential for skilled attendance. (Afsana and Rashid, 2001).

For a girl child in Somalia the prospects of attending school are poorer and that influence many women of reproductive age not to access the services of skilled birth attendants at the childbearing (WHO, 2002).
2.3.2. Economic Factors influencing access to SBAs

The high cost of delivery services restrict many mothers to access to SBAs and lead most of Births to occur at home with assistance of traditional birth attendant who lack the basic required skills for handling the complications arise at childbirth, (Canavan, 2009).

Poverty is a key factor in limiting the utilization of skilled birth attendants, it is significant determinant of decision making, low economic family is more at risk than their counterpart,

Many mothers who are aware of the importance of delivering at health facility with attendance by skilled health worker, may not access to the delivery services due to the lack of transport and user fee (Gabrysch and Campbell, 2009). Most of Somalia’s Public health facilities have fallen into disrepair since the collapse of the state in 1991. There are private health facilities which are better in forms of quality and equipment than public health facilities, therefore the cost of delivery service is expensive as clinics created for business (UNICEF, 2003).

It is not fully understood how the war situation, governance, economic and culture interact to aid or hinder the access to skilled birth attendants in Somalia today. This was the main gap that this study sought to fill.

2.4 Summary of Literature Review

Maternal and child health care utilization is essential for further improvement of maternal and child health. In particular, skilled attendance at delivery is an important intervention for reducing maternal deaths. Lack of enabling environment, accessibility of services, demographic characteristics, socio-cultural practices and economic factors
have been identified as some of the factors that hinder utilization of maternal health services.

Majority of studies have been based on maternal health services in general however there are no sufficient studies on utilization of skilled attendance at birth as well as factors that influence their utilization in Somalia in most regions in general and in Galkacyo District in particular. This study therefore, aimed to address this gap by attempting to explore the factors that were assumed to be barriers of access skilled attendance at birth.
CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter highlights the research methodology and instruments that were used to conduct this study. It comprises the study design, dependent and independent variables, study area, target population, sampling technique and sample size, research instruments, pre-testing, data collection techniques, data analysis and ethical consideration for the study.

3.2 Study design

The study used descriptive cross-sectional design. This design is preferred because it can reach a large number with low cost and short period of time, it also enables the researcher to study respondents while in their natural environment. Both the exposure and outcome of interest are measured simultaneously.

3.3 Variables

3.3.1 Independent variables

The independent variables of this study were socio-demographic characteristics including age, marital status and level of education of the respondents, Socio-cultural factors such cultural beliefs towards access to SBAs, attitudes and religion and lastly Socio-economic factors including occupation, income, transportation and road network and employment.

3.3.2 Dependent variables

The dependent variable of this study was access to skilled birth attendants. If women of reproductive age access to service of SBAs or not.
3.4 Study Area
The study area was Galkacyo district Puntland, Somalia. Galkacyo lies 700 KMs away from north of Mogadishu the capital city of Somalia and 400 KMs south from Garowe, the capital city of semi-regional autonomy of Puntland, (Puntland is a regional autonomy, it lies north-east of Somalia, It was established in 1998, eight years after former government of Siyad Bare collapsed in 1991). Puntland is quite peaceful compared to south and central of Somalia where Alshabab militia and AMISOM confrontations take place. Geographically Puntland is 30% of Somalia (UNFPA, 2011). Galkacyo is one of the largest and oldest towns in southern and central Somalia, it has been devastated by long-lasting civil war and ongoing hostilities among clans in Somalia. Galkacyo population is estimated currently 380,000 people,(UNFPA, 2007). Stability and peace in Puntland where Galkacyo is located has aspired many Somalis, and the town hosts thousands of internal displaced people(IDPs) who had displaced from southern regions of Somalia. Despite Puntland has been in calm situation since 1998, still it lacks the capacity to handle community necessities, such as maternal health services. Maternal and neonatal death rates in Somalia are almost same,(WHO,2014). The geographical strategy, high population of Galkacyo and problem facing women in reproductive age encouraged me to select it as my study area. This information was obtained by the researcher due to the fact that he has worked for some time in that area.

3.5 Target population
The target population of this study was women of reproductive age 15-49 years in Galkacyo district, Somalia. Galkacyo population is estimated 380,000 and the population of women in Galkacyo is estimated 200,000 (UNFPA, 2007).
3.6 Inclusion criteria and exclusion criteria

**Inclusion criteria**: Women of reproductive age 15-49 years, delivered in the last 6 months, living in the district within the last 6 months, willing to participate the study, were included.

**Exclusion Criteria**: It excluded women out of reproductive age either below 15 or above 49 years, not delivered in last 6 months, Women who are mentally ill. Non residents, Men and children residing in the district were excluded.

3.7 Sampling Technique and Sample size determination

The study used the following sampling technique and sample size,

**3.7.1 Sampling Technique**

The study district was purposively selected. Villages in the district were four villages. Two villages were selected randomly using the lottery method. Each village was given a unique number which were put in a bowl and mixed thoroughly. The researcher picked two numbers from the bowl and the villages having selected numbers were sampled. Convenience sampling was used to select 384 respondents to participate in the study. Purposive sampling was used to select key informants.

**3.7.3 Sample Size Determination**

Sample size was determined by using Fisher’s et al, 2003 Formula, because the total population is greater than 10,000

\[ n = \frac{z^2pq}{d^2} \]

Where

\[ N = \text{The desired sample size} \]
$z = \text{The standard normal deviate, usually set at 1.96 which corresponds to 95\% confidence level}$

$p = \text{The proportion of target population estimated to have a particular characteristics. In this case estimates for Galkacyo district was not known and there is no reliable data, such demographic health surveys therefore 50\% (0.5) was used.}$

$d = \text{Permitted error (5\%, if the confidence level is 95\%); 0.05}$

$q = 1 - p; (1-0.5=0.5)$

Therefore $n=1.96*1.96*0.5*0.5/0.05*0.05=384.16$

Therefore the sample size 384 plus 10 extra questionnaires to safeguard against non-response or low return rate. This was necessary because when using Fisher’s method, the sample size arrived at is taken to be the minimum estimate and therefore any response rate below it could have a negative effect to the study.

3.8 Construction and Research instruments

Both quantitative tools such as questionnaires and qualitative tools such as interview guide for key informants were used in this study to collect data from the respondents.

All these were guided by the conceptual framework and study objectives.

3.9 Validity and reliability

Validity and reliability of the study were ensured through pre-test in a similar group. Research assistants were trained with well-designed questionnaires in relation to the conceptual framework and research objectives. Questionnaires were translated in to Somali language. Data was checked for completeness and accuracy every day after being collected. The pre-test of this study was carried out in Garowe district, it is
similar in terms of population and both districts are controlled by Puntland (semi-regional autonomy). Health facilities and communities of both districts have similar characteristics.

3.10 Data collection techniques

Research assistants were hired to collect primary data from the respondents, they were trained well. Interviews and questionnaires were used for data collection. Key informants interview was used to find the overall picture of access and utilization of SBAs. Qualitative data was recorded in narrative form.

3.11 Data Analysis and Presentation

Data in the field was continually supervised and quality controlled by the principal researcher. Quantitative raw data from questionnaires was coded and entered using Statistical Package for Social Sciences (SPSS) data entry program. Subsequently data was cleaned and analysis done using SPSS Version 20.0 statistical package. After entry, cross tabulation was done followed by chi square statistics to get the independent variables that were significantly associated with access to SBAs p< 0.05. After chi square, Odds ratio was done to check the direction of association and to test hypothesis. Logistic regression was done to measure the outcome of independent variables. Qualitative data was transcribed and analyzed thematically and used in the discussion of results. Information generated was then presented in the text in the form of tables, bar graphs and pie charts.
3.12 Ethical Considerations

The study obtained ethical clearance from Kenyatta university graduate school. As this study was all about Somalia, permission to conduct was sought from Ministry of Education and Ministry of Health of Puntland administration. All community protocols was observed. Consent was sought from each respondent on voluntary basis. Participants were explained about the research objectives and benefits to get informed consents. As well as confidentiality was ensured to avoid putting some study respondents at risk as Somalia has been in long-lasting armed conflicts.
CHAPTER FOUR: RESULTS

4.0 Introduction
This chapter displays results and analysis of the study findings. It is organized as follows; descriptive information of the study variables, factors influencing access to skilled birth attendants. The study was based on the following objectives; to investigate factors (Demographic, Socio-cultural and Socio-economic factors) that influence access to skilled birth attendants by women in Galkacyo district, Somalia.

4.1: Social-Demographic Characteristics of respondents
A total of 384 respondents were interviewed in Galkacyo district, Somalia. The study targeted respondents aged between 15-49 years those who delivered in the last months. Also the study involved 8 Key informants. Majority of the respondents (44.3%; 170) aged between 26-35 years while the least proportion (4.9%; 19) aged above 45 years.

Assessing the level of education of the respondents, most of the study participants (35.2%; 135) had no education. The respondents who had primary education were 31.3(120), while only (13.5%; 52) were post-secondary level. With regard to marital status of the respondents, a significant high proportion of the respondents were married (60.9%; 234) whereas a least proportion (4.9%; 20) were widowed. The above demographic characteristics of the respondents are shown in table 4.1 below.
Table 4.1: Social-demographic characteristics of the study respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>N=384</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-25 years</td>
<td>124</td>
<td>32.3</td>
</tr>
<tr>
<td>26-35 years</td>
<td>170</td>
<td>44.3</td>
</tr>
<tr>
<td>36-45 years</td>
<td>71</td>
<td>18.5</td>
</tr>
<tr>
<td>&gt; 45 years</td>
<td>19</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>135</td>
<td>35.2</td>
</tr>
<tr>
<td>Primary level</td>
<td>120</td>
<td>31.3</td>
</tr>
<tr>
<td>Secondary level</td>
<td>77</td>
<td>20.1</td>
</tr>
<tr>
<td>post secondary level</td>
<td>52</td>
<td>13.5</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Married</td>
<td>242</td>
<td>62.9</td>
</tr>
<tr>
<td>Separated</td>
<td>28</td>
<td>7.8</td>
</tr>
<tr>
<td>Divorced</td>
<td>94</td>
<td>24.4</td>
</tr>
<tr>
<td>Widowed</td>
<td>20</td>
<td>4.9</td>
</tr>
</tbody>
</table>

4.2 Socio-cultural characteristics of the respondents

Majority of the respondents (58.1%; 223) stated that the community encourages delivering at health facility while the least (41.9%; 161) had reported that their community does not encourage women to deliver with skilled birth attendants. Most (49.7%; 191) of the respondents revealed that delivering at hospital with SBA is much better while (48.1%; 185) supported delivering at home and few number (2.1%; 8) of the participants were not sure the best place to deliver their babies. Majority (47.7%; 183) of the respondents reported that the right person to attend their births is SBA while same number (47.7%; 183) of the respondents reported TBA, and the least (4.7%; 18) of the women were not sure and they reported any of the above two is the right person to attend their deliveries. Most (35.5%; 135) of the respondents reported that they as a couple made decision on where to deliver their babies while (28.4%;
108) of the women made their decisions on place of delivery, the least (1.1%; 4) of the respondents reported that TBA made decisions for them. Socio-cultural factors are shown table 4.2 below.

Table 4.2 Socio-cultural characteristics of the respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>N=384</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community encourages delivering at hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YES</td>
<td>223</td>
<td>58.1</td>
</tr>
<tr>
<td>NO</td>
<td>161</td>
<td>41.9</td>
</tr>
<tr>
<td>Best place to deliver</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>185</td>
<td>48.2</td>
</tr>
<tr>
<td>Hospital</td>
<td>191</td>
<td>49.7</td>
</tr>
<tr>
<td>Not Sure</td>
<td>8</td>
<td>2.1</td>
</tr>
<tr>
<td>Right person to attend birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBA</td>
<td>183</td>
<td>47.7</td>
</tr>
<tr>
<td>SBA</td>
<td>183</td>
<td>47.7</td>
</tr>
<tr>
<td>Any of the above two</td>
<td>18</td>
<td>4.7</td>
</tr>
<tr>
<td>Decision maker of the place of delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Me</td>
<td>108</td>
<td>28.4</td>
</tr>
<tr>
<td>Husband</td>
<td>35</td>
<td>9.2</td>
</tr>
<tr>
<td>Both of us</td>
<td>135</td>
<td>35.5</td>
</tr>
<tr>
<td>Mother</td>
<td>74</td>
<td>19.5</td>
</tr>
<tr>
<td>Mother in law</td>
<td>20</td>
<td>5.3</td>
</tr>
<tr>
<td>TBA</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td>Friends\neighbors</td>
<td>4</td>
<td>1.1</td>
</tr>
</tbody>
</table>
4.3 Place of last delivery

Majority of the respondents (73%; 254) reported that they delivered at home without the assistance of skilled health worker while (27%; 115) of the respondents delivered at health facility. Figure 4.1 presents

![Figure 4.1 Proportion of women by place of delivery](image)

4.4: Reason for choosing delivering at home

Respondents who delivered at home (91.6%; 163) stated that their TBAs understand their culture while (2.2%; 4) of the respondents reported that hospital delivery deficits them as weak women.

4.5 Socio-economic factors influencing access to SBAs

Majority of the respondents (56%; 215) were house wives while (17.7%; 68) were business women, and the least (10.2%; 39) of the respondents were unemployed. Majority (32.1%; 92) of the women had husbands who were merchants while (27.5%;
79) of respondents had husbands who were casual labors, where the least proportion (9.4%; 27) of the respondent's husbands were civil servants. Most of the respondents (31.8%; 122) earned monthly income between 100-200 USD while (28.4%; 109) of the respondents monthly income was above 200 dollars, and the least (11.7%; 45) of the respondents reported that they earned monthly income less than 45 USD. Assessing distance to health facility, majority (39.1%; 150) of the respondent's homes were 500 meters-1 KM far from nearest health facility that provides delivery services, while the least (12.5%; 48) of the respondents whose place of residence was more than 2KMs far from the health facility.

Table 4.3: Socio-economic factors of the respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>N= 384</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House wife</td>
<td>254</td>
<td>66</td>
</tr>
<tr>
<td>Salaried employment</td>
<td>62</td>
<td>16.1</td>
</tr>
<tr>
<td>Business</td>
<td>68</td>
<td>17.7</td>
</tr>
<tr>
<td><strong>Husband's occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Servant</td>
<td>27</td>
<td>9.4</td>
</tr>
<tr>
<td>Merchant</td>
<td>92</td>
<td>32.1</td>
</tr>
<tr>
<td>Student</td>
<td>48</td>
<td>16.7</td>
</tr>
<tr>
<td>Casual labour</td>
<td>79</td>
<td>27.5</td>
</tr>
<tr>
<td>Unemployed</td>
<td>41</td>
<td>14.3</td>
</tr>
<tr>
<td><strong>Total income per month</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 45 USD</td>
<td>45</td>
<td>11.7</td>
</tr>
<tr>
<td>50-100 USD</td>
<td>108</td>
<td>28.1</td>
</tr>
<tr>
<td>100-200 USD</td>
<td>122</td>
<td>31.8</td>
</tr>
<tr>
<td>200 USD and above</td>
<td>109</td>
<td>28.4</td>
</tr>
<tr>
<td><strong>Distance to health facility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 500 meters</td>
<td>74</td>
<td>19.3</td>
</tr>
<tr>
<td>500 meters-1KM</td>
<td>150</td>
<td>39.1</td>
</tr>
<tr>
<td>1-2KM</td>
<td>112</td>
<td>29.2</td>
</tr>
<tr>
<td>More than 2 KM</td>
<td>48</td>
<td>12.5</td>
</tr>
</tbody>
</table>
4.6: Social-demographic characteristics influencing access to skilled birth attendants

Relationship between accessing skilled birth attendant and selected demographic characteristics was analyzed as presented in Table 4.4. Three of the four assessed demographic factors were significantly associated with access to skilled birth attendants. A significantly high proportion of respondents who had attained secondary level of education accessed skilled birth attendants (40%) compared to respondents who had no formal education (15.7%), (OR=3.57; 95% CI: 1.82 – 7.01; p<0.001). Similarly, a significantly high proportion of respondents who attained Post-Secondary level of education sought assistance from skilled birth attendants (65.4%) compared to respondents who had no formal education, (OR=10.11; 95% CI: 4.8 – 21.28; p<0.001). A significantly small proportion of divorced respondents accessed to skilled birth attendants (11.6%) compared to those who were married (36.8%), (OR=0.23; 95% CI: 1.11 – 0.46; p<0.001). A significantly small proportion of respondents whose husbands had no education accessed to skilled birth attendants (25%) compared to respondents whose husbands acquired secondary and tertiary education (84%) (OR=4.99; 95% CI: 2.285 – 10.90; p<0.001).
Table 4.4: Social-demographic characteristics influencing skilled birth attendants

<table>
<thead>
<tr>
<th>Variables</th>
<th>SBA</th>
<th></th>
<th>TBA</th>
<th></th>
<th>95% CI</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>OR</td>
<td>Lower</td>
<td>Upper</td>
<td>P-Value</td>
</tr>
<tr>
<td><strong>Age Category</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P&lt;0.08)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-25 years</td>
<td>41</td>
<td>36.3</td>
<td>72</td>
<td>63.7</td>
<td>0.85</td>
<td>0.28</td>
<td>2.57</td>
<td>0.779</td>
</tr>
<tr>
<td>26-35 years</td>
<td>40</td>
<td>23.5</td>
<td>130</td>
<td>76.5</td>
<td>0.46</td>
<td>0.15</td>
<td>1.38</td>
<td>0.165</td>
</tr>
<tr>
<td>36-45 years</td>
<td>18</td>
<td>25.4</td>
<td>53</td>
<td>74.6</td>
<td>0.51</td>
<td>0.16</td>
<td>1.63</td>
<td>0.256</td>
</tr>
<tr>
<td>&gt; 45 years</td>
<td>6</td>
<td>40</td>
<td>9</td>
<td>60</td>
<td>Reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(P&lt;0.001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>20</td>
<td>15.7</td>
<td>107</td>
<td>84.3</td>
<td>Reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary level</td>
<td>23</td>
<td>19.2</td>
<td>97</td>
<td>80.8</td>
<td>1.27</td>
<td>0.66</td>
<td>2.45</td>
<td>0.479</td>
</tr>
<tr>
<td>Secondary level</td>
<td>28</td>
<td>40</td>
<td>42</td>
<td>60</td>
<td>3.57</td>
<td>1.82</td>
<td>7.01</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Tertiary</td>
<td>34</td>
<td>65.4</td>
<td>18</td>
<td>34.6</td>
<td>10.11</td>
<td>4.8</td>
<td>21.28</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Husband's level of education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>23</td>
<td>11.1</td>
<td>114</td>
<td>88.9%</td>
<td>Reference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary level</td>
<td>25</td>
<td>36.6</td>
<td>36</td>
<td>63.4%</td>
<td>4.99</td>
<td>2.285</td>
<td>10.907</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Secondary and above</td>
<td>84</td>
<td>74.2</td>
<td>34</td>
<td>25.8%</td>
<td>23.04</td>
<td>11.054</td>
<td>48.024</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>(P&lt;0.001)</td>
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<td>UD</td>
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<td>Married</td>
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</table>

UD - Undefined
4.7: Skilled birth attendants in relation to social-cultural characteristics of the respondents

Relationship between accessing skilled birth attendance and selected social-cultural characteristics was analyzed as presented in Table 4.5. Six of the eight assessed social-cultural factors were significantly associated with accessing skilled birth attendance. A significantly high proportion of respondents who accessed skilled birth attendance indicated that the community encouraged it (42.8%) compared to respondents who indicated that the community did not encourage seeking skilled birth attendance (9.9%), (OR=6.78; 95% CI: 3.78 – 12.16; p<0.001). A significantly small proportion of respondents who indicated that their husbands did not accompany with them during delivery accessed skilled birth attendance (5.5%) compared to those whose husbands accompanied with them during delivery (52.8%), (OR=0.05; 95% CI: 0.03 – 0.11; p<0.001). A significant small proportion of respondents who indicated that Traditional birth assistants were the best people to attend to their deliveries accessed skilled birth attendance (3.9%) compared to respondents who indicated that Skilled birth assistants were the best people to attend to their deliveries (57%), (OR=0.03; 95% CI: 0.01-0.07; p<0.001). Decision maker about delivery was significantly associated with access to skilled birth attendance. A significantly low proportion of families whose decision maker about delivery was the mother in law sought assistance from skilled birth attendants (10%) compared to families whose decision maker was both husband and wife (43.2%), (OR=0.15; 95% CI: 0.03 – 0.66; p<0.012). Similarly, a significant high proportion of families whose decision maker about delivery was the mother accessed the assistance from skilled birth assistants (12.1%) compared to families whose decision maker was the couple (43.2%), (OR=0.18; 95% CI: 0.08 – 0.41; P<0.001). A significant small proportion of
respondents prefer to deliver their next child with the help of a skilled birth attendant (6.4%) compared to respondents who prefer to deliver their next child with the help of Traditional birth attendant (48.5%), (0.07; 95%CI: 0.04-0.14; P<0.001).

Table 4.5: Skilled birth attendants in relation to social-cultural characteristics of the respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>SBA</th>
<th></th>
<th>TBA</th>
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<th>95% CI</th>
<th>P-Value</th>
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<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>OR</td>
<td>Lower</td>
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<td>3.78</td>
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<td>90.1</td>
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<td></td>
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<tr>
<td>No</td>
<td>10</td>
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<td>171</td>
<td>94.5</td>
<td>0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Yes</td>
<td>95</td>
<td>52.8</td>
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<td>47.2</td>
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<td>Why home is better to deliver</td>
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<td>93.7</td>
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<td>Right person to attend your birth</td>
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<td>0</td>
<td>18</td>
<td>100</td>
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<td>UD</td>
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<tr>
<td>TBA</td>
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<td>3.9</td>
<td>172</td>
<td>96.1</td>
<td>0.03</td>
<td>0.01</td>
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<td>SBA</td>
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<td>57</td>
<td>74</td>
<td>43</td>
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<td>Decision maker about delivery</td>
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<td>Mother in law</td>
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<td>18</td>
<td>90</td>
<td>0.15</td>
<td>0.03</td>
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<td>TBA</td>
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<td>UD</td>
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<td>Friends</td>
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<td>100</td>
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<td>UD</td>
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<td>Neighbors</td>
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<td></td>
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<td>Mother</td>
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<td>58</td>
<td>87.9</td>
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<td>0.08</td>
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<td>Me</td>
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<td>77</td>
<td>71.3</td>
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<td>0.31</td>
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<td>Husband</td>
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<td>80</td>
<td>0.33</td>
<td>0.13</td>
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<td>Couple</td>
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<td>43.2</td>
<td>75</td>
<td>56.8</td>
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</table>
4.8: Socio-economic factors influencing access to skilled birth attendants

Relationship between access to skilled birth attendance and selected social-economic characteristics was analyzed as presented in Table 4.6. Respondent’s occupation was significantly associated with access to skilled birth assistance. A significant high proportion of respondents who had salaried employment sought skilled birth attendance (56.9%) compared to respondents who were in business (29.4), (OR=3.17; 95%CI: 1.52 – 6.62; P<0.002). A significant high proportion of respondents whose husband’s occupation was civil servant accessed to skilled birth attendance (37%) compared to respondents whose husband’s occupation was unemployed (14.6%), (OR=2.69; 95%CI: 1.02-7.09; P=0.046) . Similarly, respondents whose husband’s occupation was Merchant sought skilled birth assistance compared to those who husband’s were unemployed (14.6%), (OR=2.69; 95%CI: 1.02-7.09; P=0.046). Mothers whose husband’s were students accessed skilled medical assistance (66.7%) compared to respondents who their husbands were unemployed (14.6), (OR=11.67; 95%CI: 4.07-33.46, P<0.001). There was no significant difference between respondents whose husbands were casual laborers and the respondents whose husbands were unemployed, P>0.05.

The total monthly income of the respondents was significantly associated with access to skilled birth assistance, P<0.001. A significant small proportion of respondents whose monthly income was less than 45 USD sought skilled birth assistance (23.7%) compared to those who earned more than 200 USD (53.2%), (OR=0.27;95%CI: 0.12-0.63, P=0.002). Similarly, small proportion of respondents who earned between 50-100 USD accessed to skilled birth assistance compared to those who earned more than 200 USD (53.2%), (OR=0.20; 95%CI: 0.11-0.37,P<0.001). A small proportion of
respondents who earned a monthly income of between 100-200 USD sought skilled birth assistance (16.1%) compared to those who earned more than 200 USD (53.2%), (OR=0.17; 95%CI: 0.09-0.31, p<0.001).

Distance from place of residence to the nearest health facility was significantly associated with access to skilled birth assistance, P=.043).

A significant high proportion of respondents who were financially supported by their husbands sought skilled birth assistance (31.6%) compared to those who sponsored themselves (21.2%), (OR=1.71; 95%CI: 1.05-2.79, P=0.031).

A significant small proportion of the respondents who accessed skilled birth assistance indicated that nearness to the health facility was one of their considerations (17.3%) compared to those who indicated that they considered friendly health workers (58.6%), (OR=0.15; 95%CI: 0.07-0.32, P<0.001). Similarly, a significantly high proportion of respondents who accessed to skilled birth assistance indicated that they were referred to the health facility compared to those who considered friendly health workers (58.6%), (OR=3.98; 95%CI: 1.63-9.69, P=0.002).

A significant high proportion of the respondents who sought skilled birth assistance indicated that they will deliver at the hospital if the services were made free (31%) compared to those who indicated that they will not deliver at the hospital even if the services were made free (12.5%), (OR=3.28; 95%CI: 1.50-7.15, P=0.003).
Table 4.6: Socio-economic factors influencing access to skilled birth attendants

<table>
<thead>
<tr>
<th>Variables</th>
<th>SBA N</th>
<th>SBA %</th>
<th>TBA N</th>
<th>TBA %</th>
<th>OR</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
<th>P-Value</th>
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<td>0.38 1.31</td>
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<td>1.52 6.62</td>
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<td>63</td>
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<td>59</td>
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<td>0.12 0.63</td>
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<td>Others</td>
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<td>0</td>
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<td>I was referred there</td>
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<td>3.98</td>
<td>1.63 9.69</td>
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<td></td>
</tr>
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</table>
4.9: Qualitative Data from Key Informants

Eight key informants comprising two SBAs, one from public hospital and one from private health facility, one TBA, three village committees and two community health volunteers were interviewed. They reported that there is a shortage of SBAs in health facilities. The country has been in conflict situation for last two decades, and there is no central government that has the capacity to provide and reach whole the country. In Galkacyo majority of the health facilities are private hospitals and no single one which offers free services including delivery service.

Most of the interviewed key informants reported that the proportion of women accessing SBAs is very below in any acceptable standards. SBAs reported that majority of the women who deliver at health facility were transferred when their labors prolong. Village committees reported that the majority of the pregnant women culturally prefer TBAs to attend their deliveries.

Traditional birth attendant reported that TBAs are more available than SBAs, she added that they less charge for attending deliveries, she also reasoned; "TBA mostly is a neighbor, friend or relative of the pregnant woman, she is friendly and dedicated to her client than SBA who serves for various people at the health facility".

Community health volunteers reported that transportation and delivery cost lead many women to choose delivering at home, "when a woman does not have a fee for delivery or transport, there is no other option apart from to deliver at home without assistance from skilled health worker".
CHAPTER FIVE: DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter highlights the summery of the study and gives discussions, conclusions and recommendations based on the findings of the study. It also discovers the area requiring further research which this study left out.

The study was based on the following objectives; to investigate factors (Demographic, Socio-cultural, Socio-economic factors) that influence access to skilled birth attendants by women in Galkacyo district, Somalia.

5.2: Social-Demographic Characteristics influencing access to SBAs

A total of 384 respondents were interviewed and the study targeted women in reproductive age (15-49 years) and delivered in the last six months. Majority of the respondents (44.3%) aged between 26-35 years while the least proportion (4.9%) aged above 45 years. This study found that the age of the respondents did not influence women's access to services of skilled birth attendants. This finding was contrary to findings from a study carried by Wanjira et al (2011), which found that younger mothers tended to use skilled delivery care services more than their older counterparts.

The study indicated that the level of education influenced access to SBAs. The respondents who acquired post-secondary education accessed to SBAs more than any other groups. The respondents who had no education (84.3%) delivered at home with TBAs while only (15.7%) of these with no education delivered at health facility with the assistants of SBAs. Educated women sought high quality services and also they
have ability to decide delivery place. Educating mothers contributes significantly access to services of SBAs. The finding of this study is in agreement with similar studies (Babalola & Fatusi, 2009, Garg et al., 2010, Moore, et al., 2011) which reported that the more a mother was educated, the more likely she was to deliver through a skilled birth attendant.

In this study, small proportion of divorced respondents accessed to skilled birth attendants (11.6%) compared to those who were married (36.8%). The study showed that the married mothers were more likely to access SBAs more than any other counterparts.

These findings are in disagreement with those of a similar study by Ochako et al (2011) which found that single women had higher autonomy and did not depend on other people for decision making than their married counterparts who depended on their husband's decision making.

5.3 Socio-cultural factors influencing access to SBAs

This study found that a high proportion of respondents who accessed to skilled birth attendance indicated that the community encouraged it (42.8%) compared to respondents who indicated that the community did not encourage seeking skilled birth attendance (9.9%). Further the study results indicate that small proportion of respondents who indicated that home is the better place to deliver accessed skilled birth attendance (5.5%) compared to those who indicated that hospital was the better place to deliver (52.8%). This result could be attributed to the fact that most of those who delivered at home were not assisted by SBA.
The study findings shows that the most of the respondents who indicated that traditional birth assistants were the best people to attend to their deliveries utilized skilled birth attendance (3.9%) compared to respondents who indicated that skilled birth assistants were the best people to attend to their deliveries (57%). This could be attributed to the fact that these women had their preference for whom will assist them before they had delivered.

In this study decision maker about delivery was significantly associated with access to skilled birth attendance. Low proportion of families whose decision maker about delivery was the mother in law sought assistance from skilled birth attendants (10%) compared to families whose decision maker was both husband and wife (43.2%). The study found that families whose decision maker about delivery was the mother accessed the assistance from skilled birth assistants (12.1%) compared to families whose decision maker was the husband and wife (43.2%). This study findings is similar with other study (Singh et al., 2012) that reported the same findings.

This study showed that small proportion of respondents prefer to deliver their next child with the help of a skilled birth attendant (6.4%) compared to respondents who prefer to deliver their next child with the help of Traditional birth attendant (48.5%).

5.4: Socio-economic factors influencing access to skilled birth attendants

In this study, respondent’s occupation was significantly associated with accessing skilled birth assistance. A high proportion of respondents who had salaried employment sought skilled birth attendance (56.9%). When women were employed or working, properly they were able to save some money in preparation towards their delivery. The results of this study is in agreement with similar studies (Gabrysch and
Campbell, 2009) which showed that mother's occupation played an important role in delivery service utilization.

The total monthly income of the respondents was significantly associated with access to skilled birth assistance in this study. The respondents who earned monthly income less than 50 USD utilized services of SBAs (23.7%) compared to those who earned more than 200 USD (53.2%). This result concurs with results from a study by Pathak (2010) who found that use of SBAs remained considerably lower among poor mothers relative to their non poor counterparts.

In this study, distance from place of residence to the nearest health facility was significantly associated with accessing skilled birth assistance. The study found that the respondents who were financially supported by their husbands sought skilled birth assistance (31.6%) compared to those who sponsored themselves (21.2%). The study findings concur with results from other studies (Gabrysch and Campbell 2009), which showed that the occupations of women and husbands contribute access to SBA services.

5.5 Conclusion

1. The proportion of women accessing to the services of skilled birth attendants was very low (27%).

2. The demographic characteristics of the respondents such level of education, marital status were significantly associated with access to skilled birth attendants. Null hypothesis was rejected.
3. Assessed socio-cultural factors such as religion and decision maker about place of the delivery were significantly associated with accessing skilled birth attendance. Null hypothesis was rejected.

4. Socio-economic determinants; occupations of both respondents and their husbands, monthly total income and transportation were significantly associated with access to SBAs. Null hypothesis was rejected.

5.6 Recommendations

The following recommendations were made based on the study conclusions;

1. Ministry of Education needs to upgrade educating young girls so that they enable them to make informed choice for their health outcomes and timely access to skilled health workers. This study found that the mothers are more educated the more they seek skilled birth attendants.

2. To overcome socio-cultural practices influencing access to SBAs, the MOH should provide CHWs for improving community health educations.

3. Women should be economically empowered as to enable them access to higher quality of services including delivery care. More jobs should be created for women.

5.7 Areas of further research

1. Hence this study was only about urban community, a comparative study between rural and urban should be done to assess their access to skilled birth attendants.

2. Further research should be carried out to investigate more socio-economic factors that influence access to services of skilled birth attendants.
REFERENCES


DFID (2005). Achieving skilled attendance for All; A synthesis of Current Knowledge and Recommendation actions for scale up. DFID health resource center.

Ethiopian Demographic Health Survey 2005; Ethiopia Society of Population studies


Appendix 1: Consent Form

My name is Mohamed Suleiman Yusuf. I am doing master of public health (reproductive health) at Kenyatta university (school of public health) I am conducting a study on determinants of access to skilled birth attendants by women in Galkacyo district. I appreciate if you participate the study and information provided or your name will not be mentioned or published, The research will not bring a direct benefit but it may call intervention after maternal and neonatal complications being discovered and may contribute at improving maternal health at childbirth. The questionnaire/Interview may take 20-30 minutes, so if are you willing to participate?

YES        NO

Date................ Signature.................................
Appendix 2: Questionnaire for women of reproductive age

Section one: Demographic data

Q1. What is your age?

1) 15-25
2) 26-35
3) 36-45
4) > 45

Q2. What is your level of education?

1) No education
2) Primary level
3) Secondary level
4) Post-secondary level

Q3. What is your marital status?

1) Single
2) Married
3) Separated
4) Divorced
5) Widowed

Q4. What is the level of education of your husband?

a. No education
b. Primary level
c. Secondary and above
Section Two: Socio-cultural factors

Q5. Do your community encourage delivering at hospital?
   a. YES
   b. NO

Q6. Did your husband accompany you during delivery?
   a. Yes
   b. No

Q7. Where is the best place to deliver?
   a. Home
   b. Hospital

Q8. If home in 7 above, what is your reason?
   1. My clan is against hospital deliveries
   2. Hospital delivery deficits me as a weak woman
   3. My traditional birth attendant understands my culture

Q9. Who decided where to deliver your baby?
   1) Me
   2) Husband
   3) Both of us
   4) mother
   5) mother in low
   6) TBA
7) Friend/ neighbour
8) Others (specify)

Q10. Who would you prefer to assist for your next delivery?

1) SBA
2) TBA.
3) CHW
4) Not sure
5) Others (Specify)

Q11. Which religion do you believe?

1) Islam
2) Catholic
3) Traditionalist
4) Others (Specify)

Q12. Does your religion affect your choice of delivery attendant?

1) YES
2) NO

Section Three: Factors associated with socio-economic

Q14. What is your occupation?

1) House wife
2) Unemployed
3) Salaried employment
Q15. What is your husband's occupation?

1) Civil servant
2) Merchant
3) Student
4) Casual labour
5) Unemployed
6) Others(Specify)

Q16. What is total income of your family per month?

1) Less than 45 dollars
2) 50-100 dollars
3) 100-200 dollars
4) 200 USD and above

Q17. How far is your home from the health facility that provides delivery services?

1) Less than 500 meters
2) 500 meters-1KM
3) 1-2 KM
4) More than 2 KM

Q18. Where did you deliver your last baby?

1) Home
2) Health facility

Q19. If it was health facility (Specify)?

1) Private hospital

2) Public hospital

3) NGO

4) Others (specify)............

Q20. If it was private hospital, how much was the cost of delivery?

1) Less than 10 dollars

2) 10-30 dollars

3) 30-50 dollars

4) Above 50 dollars

Q21. If it was public hospital, how much did you spend for your last delivery?

1) Zero/ free

2) Less than 10 dollars

3) 10-20 dollars

4) Above 20 dollars

Q22. Who financially supported your last delivery?

1) Self-sponsored

2) Husband

3) Insurance
4) Others (specify).............

Q23. What was the main consideration for choosing where to deliver in Your last delivery?

1) Cost
2) Nearness
3) Friendly health workers
4) I was referred there
5) Others (specify)

Q 24. Would you prefer to deliver your next baby at health facility if it offers free services?

1) YES
2) NO
Appendix 3: Questionnaire translated in to Somali language

Qaybta 1aad: Maclumad kusabsan nolosha bulshada

Q1. Imisa sano ayad jirta?
   5)  15-25
   6)  26-35
   7)  36-45
   8)  > 45

Q2. Heerke waxbarshada ka gaartey?
   5) waxba ma baran weligey
   6) Dugsi hoose dhexe
   7) Dugsi sare
   8) Heer jaamacadeed

Q3. Wax nooga sheg noloshada dhanka guurka?
   6) Gabar
   7) Xaas
   8) Kalaamaqnan
   9) La furay
   10) Laga dhintay

Q4. Ninkaagu heerkee bu waxbarashada ka gaarey?
   d. Weligi wax ma baran
   e. Dugsi hoose dhexe
   f. Dugsi sare iyo ila her jamacaded

Qaybta 2aad: Arimaha laxirira dhaqanka

Q5. Bulshadaadu ma dhiiri gelisa in xarun cafimad lagu dhalo cunuga?
   c. Haa
   d. Maya

Q6. Ninkagu mu kuuraaca xarunta dhalmada waqtiga foosha?
   c. Haa
   d. Maya

Q7. Xagee baad aminsantahay inay tahay mesha ugu fiican e cunug lagu dhalo?
   c. Guriga
   d. Xarun cafimad
Q8. Hadi jawabtadu tahay guriga, Noosheg sababta?

4. Qabilkayga aya kaso horjeda in xarunta cafimad lagu dhalo
5. Qof liita ban noqonaya hadan xarun cafimad kudhalo
6. Umuliso dhaqameedka aya ad ifahmi karta waqtiga dhlmada

Q9. Qofke go amiya meesha lagu dhalo?

9) Aniga
10) Ninkayga
11) Labadayada go amina
12) Hoyadey
13) Sodohdey
14) Umuliso dhaqamedka
15) Asxabta/ deriska
16) Kuwa kale (Kala cade)

Q10. Yaad jeclan lahayd inay kaa umuliso cunuga sosocda e ad dhali donto?

6) Xirfadle cafimad
7) Umuliso dhaqamed.
8) Dadka cafimadka bulshada kashaqeya
9) Ma hubo
10) Kuwo kale(kała cade)

Q11. Diinte aaminsantahay?

5) Islam
6) Catholic
7) diin dhaqamed
8) mid kale( kała cade)

Q12. Diintadu wax samayn ah miyay kuyeelata cida ad udoran lahayd inay ka umuliso?

3) Haa
4) Maya

Qaybta 3aad: Arimaha la xiriira dhaqaalaha

Q14. Maxaad ka shaqeysa?

6) Guri joog
7) Ma shaqeeyo
8) Mushahaaari
9) Ganacsato
10) Mid kale (Kala cadee)

Q15. Ninkaagu muxu ka shaqeeya?

7) Shaqaale rayida
8) Ganacsade
9) Ardey
10) Muruq maal
11) Ma shaqeeyo
12) Wax kale (Kala cade)

Q16. Qoyskina lacag inte le eeg bay helaan bishi?

5) Wax kayar 45 dollar
6) 50-100 dollar
7) 100-200 oo dollar
8) 200 o dolar iyo kabad

Q17. Xarunta cafimad e dhalmo ee kugu dhow inte bay ujirta xafadada?

5) Wax kayar 500 oo talaabo
6) 500 ila kun talaabo
7) Kun talaabo ila labo kuno talaabo
8) Laba kun o talaabo iyo wax kabadan

Q18. Cunugaagi kugu dambeyey xage kudhashay?

3) guriga
4) Xarun cafimad

Q19. Haday xarun cafimad ahayd (Kala cade)?

1) Xarun cafimad o gaar looleeyahay
2) Xarun cafimad o dawladed
3) Hayad maxali ah
4) Kuwa kale (Kala caded).

Q20. Hadi xarun gaar looleeyahay ay ahayd, imisa ayay ahayd lacagta dhalmada?

5) Wax kayar 10 dollar
6) 10- 30 dollar
7) 30-50 dollar
8) wax kabad 50 dollar

Q21. hadi ay ahayd xarun dawladed, Meeqa qarash kaaga baxay dhalmadii kugu dambeysey?

5) Waxba/ bilaash
6) Wax kayar 10 dollar
7) 10-20 dollar
8) wax kabadan 20 dollar

Q22. Yaa kaa caawiyey qarashki dhalamda kugu dambeysay?

1) Aniga iska bixiyey
2) Ninkayga
3) Caymis cafimad
4) Kuwa kale(kala cade)....... 

Q23. Maxaa kuugu wayna o ad ahmiyada koowad sineysey markaad dooranyeysay meesa ad ku dhalayso?

6) Qarashka
7) Dhawaanshaha
8) shaqaale cafimad o sodhawyn leh
9) Waa lay gudbiyey
10) Kuwa kale(kala cade)

Q 24. Ma doorbidi lahayd inad kudhasho xarun cafimad hadi ay lacag la an tahay dhalmadu?

3) Haa
4) Maya
Appendix 4: Interview guide For Key Informants

1. What is level of access to skilled birth attendants in your village?
2. In your opinion, who is the most preferred to attend deliveries in your village?
3. What are the factors influencing the selection of birth attendants?
4. What kind of complications do mothers face here during delivery?
5. Are there religious, cultural, and traditional practices that influence choice of who to assist women during delivery?
6. In your village, are there plans you have put in place to assist a pregnant women in case of an emergency?
7. In your experience, what is the attitude of women towards delivering with SBAS?
8. In your view, what is attitude of women towards delivering with TBAs?
9. In your opinion, do cost of delivery of health facilities lead women to deliver at home?
10. Who is easily available SBA or TBA in your community
11. Does government have policy towards offering free health services to pregnant women?
Appendix 5: Permission from Kenyatta University Graduate School

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

FROM: Dean, Graduate School

TO: Mohamed Suleiman Yusuf
C/o Population & Reproductive Health.

DATE: 27th July 2016

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting of 27th July 2016, approved your Research Proposal for the M.P.H Degree. Entitled, “Determinants of Access to Skilled Birth Attendants by Women in Galkayo District, Somalia”.

You may now proceed with data collection, subject to clearance with the Permanent Secretary, Ministry of Higher Education, Science and Technology.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking forms per semester. The form has been developed to replace the progress report forms. The supervision Tracking Forms are available at the University’s website under Graduate School webpage downloads.

Thank you.

ANNBEL MWANIKI
FOR: DEAN, GRADUATE SCHOOL

Supervisors:

1. Dr. Maurice Kodhiambo
   C/o Department of Pharmacy
   Kenyatta University

2. Dr. John Kariuki
   Dean School of Public Health
   Mount Kenya University
   C/o Department of Population and Reproductive Health
   Kenyatta University
Appendix 6: Permit from Ministry of Education

To whom it may concern

RE: RESEARCH AUTHORIZATION

We are here authorizing Mr. Mohamed Suleiman Yusuf to carry out research in Galkacyo district, Puntland, Somalia on "Determinants of access to skilled birth attendants by women in Galkacyo District, Somalia"

Mohamed is currently perusing his Master's degree at Kenyatta University in Nairobi, Kenya. Therefore any assistance given to this student is highly appreciated

Mohamed Abdikadir Osman
Director General
Ministry of Education and Higher Education
Puntland Government of Somalia
APPENDIX 7: Map Showing Study Area
Appendix 8: Map of Somali