

**SOCIOECONOMIC IMPLICATIONS OF OBSTETRIC FISTULA AMONG  
WOMEN TREATED AT GYNOCARE FISTULA CENTRE, ELDORET-  
KENYA**

**BY:**

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## DECLARATION

### Declaration by the Candidate

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## **DEDICATION**

This thesis is dedicated to the survivors of obstetric fistula in general and specifically the brave women who willingly participated in this study. I share your joy of recovery and the determination to press on with reclaiming your place in society in all its fullness.

## ABSTRACT

**Introduction:** The study focused on the socioeconomic status of obstetric fistula patients treated in Gynocare Fistula Centre located in Uasin Gishu County, Kenya. Specifically the study sought to determine demographic characteristics of women admitted with obstetric fistula (OF), assess the socio-cultural characteristics and to describe the psycho-social and economic conditions faced by obstetric fistula women treated at Gynocare.

**Methodology:** The study used quantitative method, guided by in-depth interviews, questionnaires, and key informant. The main focus was on women with fistula who had come for repair services at the centre and whose fistula was primarily as a result of obstetric fistula. Data was collected from one hundred and thirty eight women with fistula, and seven key informants including two nurses, two doctors, one administrator and two social work officers' at the repair centre.

**Finding and Discussion:** The findings of the study shows that (44%) of the respondents had one to three children while (41%) had no living children. More than one third of the respondents (39%) attended antenatal clinic four times in the most recent pregnancy that resulted in the development of (OF). Majority (80%) of the respondents delivered at the hospital while (7%) were attended to by skilled birth attendants during delivery. More than two thirds of the respondents (69%) were in labour for more than 24 hours. Some of the women with fistula realize leakage of stool and urine within 2 to 8 days post-delivery. This experience predisposes them to social stigma and relationship problems with their spouses. The major social impact to women with OF was established to include stigmatization and isolation by community, divorce by spouse and fear to participate in social events by the affected women. There is reduction (69%) in participation of women with fistula in community groups after sustaining fistula. Economic implications of (OF) to women include loss of income; leadership roles in community development groups and self-esteem that make many women with the condition disembark their income generating activities. Stigma associated with OF causes the clients to live a life of isolation and many lost their livelihoods as a result. Therefore successful repair of fistula brings a lot of joy and a renewed hope not only for the survivor but also to her immediate family. There is however, the need to assist the fistula survivors fit back into community life by equipping them with skills that they can use to become financially empowered.

**Conclusion:** Obstetric fistula is an inequality issue and most of the challenges can be prevented with increased awareness, better referral between hospitals and quality care. Treatment of fistula must go beyond the closing of a physical hole, but address physical, psycho-social and economic challenges to completely rehabilitate the individual affected after repair.

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**ABBREVIATIONS**

<b>BMI</b>	Body Mass Index
<b>C/S</b>	Caesarean Section
<b>CBASSE</b>	Commission on Behavioral and Social Sciences & Education
<b>IRIN</b>	Integrated Regional Information Networks.
<b>KDHS</b>	Kenya Demographic and Health Surveys
<b>MDG's</b>	Millennium Development Goals
<b>OF</b>	Obstetric Fistula
<b>RVF</b>	Recto-Vaginal Fistula
<b>TBA</b>	Traditional Birth Attendants
<b>UNICEF</b>	United Nations International Children Education Fund
<b>UNFPA</b>	United Nations Fund for Population Activities
<b>UNO</b>	United Nations Organization
<b>VVF</b>	Vesicovaginal Fistula.
<b>WHO</b>	World Health Organizations

## DEFINITION OPERATIONAL OF TERMS

**Caesarean Section** – This is the surgical removal of the baby during birth (Iyaniwura and Yussuf, 2009)

**Fistula-** Is an abnormal connection or passageway between two epithelium-lined organs or vessels that normally do not connect. It is generally a disease condition, but a fistula may be surgically created for therapeutic reasons (Waaldijk, 2008).

**Maternal Care** This is the care that a mother is given during her pregnancy period and during the time of giving birth (Kijugu, 2009).

**Maternal morbidity** Is a condition that adversely affects a woman's physical health during childbirth beyond what would be expected in a normal delivery (WHO, 2004)

**Maternal Mortality** Also known as 'obstetrical death' and is defined as death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (World Health Organization, 2006).

**Medical consequences of obstetric fistula:** is defined in this study as the medical effect of obstetric fistula impacting on women suffering from the condition measured in terms of incontinence of urine and/or faeces, foot drop, chronic skin irritation, bladder stone, vaginal stenosis, secondary infertility (Norman, Breen, et al., 2007).

- Obstetric fistula** Is a severe medical condition in which a fistula (hole) develops between both the rectum and vagina or between the bladder and vagina after severe or failed childbirth, when adequate medical care is not available (Kenya Ministry of Health, 2004)
- Psycho-social consequences of obstetric fistula:** is defined in this study as the psychological and social feelings impacting on women suffering from obstetric fistula (De Ridder *et al* 2009).
- Socio-demographic characteristics** are the characteristics that may influence health care seeking such as gender, literacy, education, regular income and age, as well as access-related concerns (Muleta, Fantahun *et al.* 2007).
- Recto Vaginal Fistula** This is the presence of an unnatural opening between the rectum and the vagina (Engender Health, United Nations Population Fund, 2003).
- Urogenital Fistula** A fistulous opening into the urogenital tract (Falandry, 1992).
- Vesico Vaginal Fistula** This is the presence of an unnatural opening between the bladder or the urethra and the vagina (Raza Khan, Nabeela Raza *et al.*, 2005)
- Urine Diversion** A new technique for patients whose fistulas are hard to treat where urine and /or stool is diverted to come out through one opening (Wall, Karshima, Kirschner and Arrow smith, 2004)

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Poor maternal and reproductive health indicators in developing countries are still typical of a sub-Saharan Africa where mass poverty, illiteracy, ignorance, disease, gender inequality, unrestricted sexual behavior, harmful traditional practices and poor social amenities all combine to nurture reproductive ill health and developmental backwardness. Africa accounts for 25% of the world's landmass but more than 70% of the approximately 50 poorest countries of the world are in sub-Saharan Africa (Harrison, 1985). Also, whereas Africa harbors about 12% of the world's population, it is able to secure only 1% of world's trade and 0.4% of its manufacturing export to developed countries (Harrison, 1985). More than 75% of population in sub-Saharan Africa lives below the internationally defined poverty line which is less than 1 US D per day (World Bank, 2005). These poor living standards have led to inaccessibility to health services due to financial difficulties especially by women.

Evidence that the poor often benefit less from public spending is well established in the literature (Demery, 2000; Makinen *et al.*, 2000). The reason why the poor do not make more use of public services is driven by both supply and demand factors. In addition, reports on Macroeconomics and Health reinforced the need to overcome the substantial barriers for the poorest (Sachs, 2001). The focus of much health policy intervention has been on reducing supply barriers. Delivery of essential services concentrates on improving the quality of staff skills, protocols of treatment, availability of supplies and improvement of health facilities. Yet while these interventions are important, they do not address many of the barriers related to accessing services that are faced by a patient in low-income countries. Whether and

where to go for treatment starts well before arrival in a facility and requires a myriad of complex, and potentially confusing choices to be made such as accessibility, affordability, acceptability, availability and competency. Often, health services of a reasonable quality exist, but few use them. Just as important are the physical and financial accessibility of services, knowledge of what providers offer, education about how to best utilize self and practitioner-provided services and cultural norms of treatment.

(WHO, 2005) has summarized three crucial factors that underlying maternal morbidities and deaths. First, lack of access and utilization of essential obstetric services. There is a negative association between maternal mortality rates and maternal health care utilization. (WHO, 2005) estimates suggest that 88 to 98 percent of all pregnancy-related deaths are avoidable if all women would have access to effective reproductive health care services (Kunst & Houweling 2001, p.295). Secondly is the low socioeconomic status of women in developing countries. The low status of women can limit their access to economic resources and basic education, the impact of this is that they have limited ability to make decisions, including those related to their health and nutritional preferences. Thirdly, too much physical work together with poor diet also contributes to poor maternal health outcomes due to poor body structure development.

Maternal mortality and morbidity remain a conspicuous and severe challenge to public health in developing countries. Each year, pregnancy- related complications claim lives of 500,000 women worldwide, with around 99% of these deaths occurring in developing countries (WHO, 2005). Current best estimates indicate that for each woman who dies from pregnancy- related complications, 15 to 30 women are

seriously impaired and disabled from childbirth related complications in less developed countries. In sub-Saharan Africa alone, between 30,000 and 130,000 of women giving birth develop fistula each year (UNFPA 2008).

Obstetric fistula is an extremely debilitating morbidity that occurs in situations of obstructed and prolonged labor resulting in an opening connecting the bladder and the vagina or connecting the rectum and the vagina, or the bladder and the rectum with the vagina, which leaves women with chronic leaking of urine, stool, or both. The severe nature of obstetric fistula puts a serious toll in the lives of those affected. Most of the women who suffer from fistula are often stigmatized because in most cases they experience acute social isolation stemming from the persistent smell due their incontinence (Wall, 2006).

The underlying causes of obstetric fistula are poverty, early marriage, the low social status of women and girls in the society, lack of accessible and adequate health services and lack of transportation and education. Because of their low status in many communities, women often lack the power to choose when to start having sexual relations or when to start bearing children (UNFPA, 2006). Poverty and malnutrition in children also contributes to the condition of stunting, where the girl's skeleton, in particular the pelvis does not fully develop. This stunted condition can contribute to obstructed labor, and therefore may result in fistula during birth (Fistula Foundation, 2008).

Immediate causes for fistula may be obstructed labor, pelvic surgery, and sexual abuse before reaching physical maturity, malignancies, and radiotherapy or a combination of these. In most third world countries, however, over 90% of fistulae are of obstetric nature and usually caused by obstructed labor (Hilton, 2001; Ruth, 2007).



Studies conducted at Addis Ababa Fistula Hospital also reveal that around 96% of the cause of fistula is obstructed labor. However, cases of fistula as a result of sexual abuses are also prevalent in different parts of the world. (Muleta, Hamlin, Fantahun, Kennedy and Tafasse, 2008).

The consequences of fistula are usually life shattering: as mentioned earlier the baby dies in most cases and the woman is left with chronic incontinence. Because of her inability to control her urine and/or feces, she is often abandoned or neglected by her husband and family and ostracized by her community. Without treatment, her prospects for work and family life are greatly diminished, and she is often left to rely on charity (UNFPA, 2006).

Women with fistula in most cases suffer physical, mental, and social and health problems and assessing its impact on these women entails looking at all these problems (Warren and Mwangi, 2008). This entails damage to the normal functioning of the body, stress because of the discomfort of smelling all the time, isolation due to stigma attached because of cultural believes, abandonment by loved ones and most important the health issues which include urine or/and stool incontinence, foot drop obstetric nerve palsy due to nerve damage with other severe lesions that might result (Hilton, 2001; UNFPA, 2006). These also result in economic challenges because many loose their means of financial support and may have difficulties getting employment due to the fact that nobody wants to be associated with them. Being already among the most marginalized populations, their condition pushes them further into poverty and fringes of society (Ramsey, 2005).

Other associated psycho-social factors found to be experienced by obstetric fistula patients include; depression, low self-esteem, feeling of embarrassment, lack of sexual pleasure or satisfaction. These factors were similarly found by other studies including those of Browning (2004); Islam and Begum, 1992); Kabir (2003); Ojanuga (1991). Wall (1996), in his study states that women who suffer the condition of obstetric fistula are “the most dispossessed, outcast and powerless group of women in the world”; while, (UNPFA, 2001), concluded that “if anyone had seen the sad eyes of these young girls, really children, embarrassed and ashamed of themselves, they will never forget the torment and despair. It is disability from pregnancy that is disgraceful, unacceptable, and a denial of our claim to being a caring and compassionate society. The afflicted patients are being divorced by their husbands and rejected by families and relations Sambo, (1994) with no education and means of livelihood, end up either begging or employed in casual work. Yet, despite the severity of this health condition, obstetric fistula has been less researched than female genital cutting in the field of reproductive health (Dejong, 2005). This study, therefore sought to assess the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret, Uasin-Gishu County, Kenya.

## **1.2 Problem Statement**

Obstetric fistula has on a large sense been eliminated in developed countries though it remains a major concern in developing countries with high prevalence values where WHO, (2004) estimates the prevalence of fistula to be not less than two million with an annual 50,000 to 100,000 new cases reported each year worldwide. In Kenya, the prevalence stands at 100,000 and an incidence of 3,000 each year WHO, (2004) mostly affecting women from low economic class and with its challenges it even draws these women to deeper pits of poverty. The morbidity that women face at child

has a lot of stigma and in most African cultures people consider these women as misfits in society and women end up hiding it due to fear of isolation which will consequently lead to isolation and suffering. Fistula is a big challenge to these women economically because women end up being isolated, some stop working due to stigma and some are even rejected by their husbands leading to very miserable life and thus poverty increases. In this regard, research was carried out in the Gynocare Fistula Centre in Eldoret to examine the lives of women suffering from fistula, including the physical and social consequences associated with the condition and attempts to obtain care.

### **1.3 Justification of Study**

Little has been documented about obstetric fistula and even from the fistula surgeons in the country, it is very clear and in fact indicator that a small number of people are interested and will want to be associated with the problem since it is believed to affect those poor women in villages who cannot even afford to deliver in hospital thus cannot even pay for treatment. There is a significant reduction in the incidence of fistula where by UNFPA attributes the incidence to be 3000 per year (UNFPA, 2005), there is still a large number of women who so far have not received treatment due to lack of awareness, ignorance and hiding their problem because of shame. This study will try creating a picture of the social-economic background of women with fistula and are seeking treatment at Gynocare and the economic implications and what challenges these pose to the society's social-economic status. Information acquired can therefore be disseminated to the authorities and relevant ministries to plan and put systems in place in the fight to end fistula which is still being reported to date while it is also true that there are women who have suffered with this condition for more than forty (40) years.

Most of the published research on fistula in developing countries comes from clinical based studies (Wall, 2006; Ramphal et al. 2007; Di Marco, 2008), therefore limiting scope and broader generalization. These studies are also largely descriptive and focus on fistula treatment and repair. Knowledge on the economic effects as well as on the characteristics of the women affected by the morbidity is still limited. Few studies have examined what the social consequences are for women with fistula or how the broader social structure in which these women live affects the way they are treated. Owing to the scarcity of existing published research, this study sought to assess the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret, Uasin-Gishu County, Kenya.

#### **1.4 Research Questions**

The study was guided by the following research questions:

1. What are the demographic characteristics of women admitted with obstetric fistula at the Gynocare Fistula Centre in Eldoret?
2. What are the socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret?
3. What are the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret?

#### **1.5 General Objective**

The objective of this study was to assess the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret-Kenya.

## 1.6. Specific Objectives

2. To determine demographic characteristics of women admitted with obstetric fistula at the Gynocare Fistula Centre in Eldoret.
3. To assess the socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret.
4. To describe the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret.

## 1.7 Research Hypotheses

To address the above objectives, the following hypotheses were tested:

**H<sub>0</sub>:** There is no significant relationship between demographic characteristics of women and obstetric fistula treatment at a 'P' value where ( $p > 0.05$ ).

**H<sub>0</sub>:** There is no significant relationship between socio-cultural characteristics of women and obstetric fistula treatment at a 'P' value where ( $p > 0.05$ ).

**H<sub>0</sub>:** There is no significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment at a 'P' value where ( $p > 0.05$ ).

## 1.8 Significance of the study

This research is expected to add to the existing knowledge information about the problem of fistula in Kenya by focusing on the socio-economic challenges faced by women currently seeking treatment. This will consider securing of jobs, acceptance in society, family relations, and transportation to hospitals, surgical treatment and all that it takes in the treatment of these women. The other purpose is to make a modest contribution regarding this problem and possibly give an input for health care providers and other stakeholders in Kenya that are working towards reduction of

obstetric fistula. The study may encourage other researchers, students to undertake further research on the subject to broaden our understanding of the problem. The research findings could also be used as a reference for other studies that could be conducted in the future.

Although there has been a great achievement in the treatment of obstetric fistula, literature review revealed that women's intention to prevent obstetric fistula recurrence have received little attention to date in Kenya. Many of the studies done in many countries related to reproductive health issues have focused more on maternal mortality, eclampsia, postpartum hemorrhage and anemia, with less attention given to obstetric fistula (WHO, 2005). An intensive literature search isolated only few obstetric fistula studies in Kenya. One empirical research social re-integration of the women back into the community after undergoing successful obstetric fistula repairs at the three AMREF intervention sites, namely New Nyanza General hospital, Kisumu; Kisii Level five Hospital in South Nyanza and Kenyatta National Hospital (KNH), Nairobi (Kimani, 2013), and a retrospective study to describe and compare the demographic characteristics of women with obstetric fistula conducted in West Pokot, Kenya (Mabeya, 2003).

There is increased repair failure rate with repeated attempts and consequences of obstetric fistula are multiple with both physical and psychological problems. Therefore, it is imperative to find ways of reducing the rate of obstetric fistula occurrence. The study findings revealed the women's intention gaps in prevention of obstetric fistula occurrence. The findings will be used to develop educational strategies to improve knowledge of the risk factors of obstetric fistula occurrence and behavioral strategies to improve attitudes towards obstetric fistula prevention and

change health seeking behaviors. Further, the findings could be used by Ministry of Health, health workers and nongovernmental organization involved to formulate policies and effective strategies to enhance the quality of life of women with obstetric fistula. The results from the current study have provided a baseline by filling this knowledge gap.

### **1. 9 Scope of the study**

This research was restricted to women with fistula as the core study patients that visited Gynocare Fistula Centre Eldoret and was mainly focused on establishing the pre-fistula experiences and the socio-economic impact of fistula including life experiences. It also focused on women's recommendations in respect to their socio-economic life experiences in families and communities and the magnitude of the support needed. Some factors also influence the process and outcome of the study but as already stated above, the study area was limited to Gynocare Fistula centre, a facility that was established in 2010 as a fistula centre opened for surgery in June 2011 and draws its patients mostly from the western part of Kenya and operates up to 300 cases in a year. Thus it should be noted that the regional distribution of the patients does not exhaustively cover the entire country despite the assumption that the problems faced by these mothers are common.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter discusses the previous studies on social economic implication of obstetric fistula among women seeking treatment. The chapter acknowledges the contribution made by other scholars, publications (articles, seminar papers, government policy papers, conference proceedings, training manuals, legislature documents, research reports, business journals, textbooks, newspapers, and periodicals). It identifies gaps in the current literature, and suggests ways in which these gaps can be filled, particularly in the context of coping strategies among women attending the Gynocare Fistula centre at Eldoret, Kenya. The review also discusses some of the effects of demographic characteristics, socio-cultural characteristics and psycho-social and economic conditions of women on obstetric fistula treatment. This chapter is structured into sub-sections under the following headings:

#### **2.2 General Overview of obstetric fistula**

An obstetric fistula is a hole between a woman's birth passage and one or more internal organs that typically develops as a result of obstetrical trauma (Wall, 1996). Obstetric fistula is a chronic condition usually caused by prolonged, obstructed labor without timely, appropriate and quality medical intervention normally a C/S. Labor is considered obstructed when the presenting part of the fetus cannot progress into the birth canal, despite strong uterine contraction (Wall et al., 2001). During prolonged labor, the pressure of the baby's head against the mother's pelvis can cut off the flow of blood to the soft tissues of the bladder, vagina, and rectum. The mother's injured pelvic tissue soon sloughs away, leaving a fistula between adjacent organs. It could be



between the vagina and the bladder or the vagina and the rectum or both, resulting in permanent incontinence of urine or stool or both (Ramsey, 2005).

Various types of obstetric fistulas as outlined by (Arrowsmith and Hamlin, 1996) include:

Vesico-Vaginal Fistula (VVF): If the fistula is between the vagina and bladder. In this case urine leaks from the vagina; Recto-Vaginal (RVF): If the fistula is between the vagina and rectum, feces leaks; Enterovaginal Fistula: If the fistula is between the intestine and the vagina; Uteroperitoneal Fistula: If the fistula is between the uterus and peritoneal cavity and Cervical Fistula: If there is an abnormal opening in the cervix.

The great majority of fistulas are, however Vesico-vaginal. Estimates of the extent of recto-vaginal fistulas are few including 7% in a case series of patients in Ethiopia and 4% in a series of patients in Nigeria. An estimated 6% to 24% of obstetric fistula cases are combined VVF and RVF (Hinrichsen, 2004). In the developed world, fistula is mostly as a result of pelvic surgery, malignancy, radiotherapy, surgical complication or a combination of these (Wall et al., 2001). In the developing world however, fistula predominantly stems from obstetrical trauma resulting from obstructed labor, others result from direct trauma caused by rape or other sexual abuses (Ruth, 2007).

Regarding women health, Developmental and reproductive health indicators in developing countries are still typical of a sub – Saharan Africa where mass poverty, illiteracy, ignorance, disease, low status of women, unrestricted sexual behavior resulting in high population growth rate, harmful traditional practices and poor social amenities all combine to nurture reproductive ill health and developmental

backwardness. Africa accounts for 25% of the world's landmass but more than 70% of the approximately 50 poorest countries of the world are in sub-Saharan Africa (Harrison, 1997). Also, whereas Africa harbors about 12% of the world's population, it is only able to secure 1% of world's trade and 0.4% of its manufacturing export (Harrison 1997). More than 75% of populations in sub-Saharan Africa live below the internationally defined poverty line of 1 USD per day (World Bank, World Development Indicators, 2004). But due to lack of finance women are severely affected by diseases that can be alleviated and thus need for this study.

### **2.2.1 Causes of Obstetric Fistula**

The overall impression that one gets about the causes of obstetric fistula from different authors and authorities is that fistula patients come from poor rural areas where infrastructure development is rudimentary and access to health care, particularly access to basic midwifery and emergency obstetric services is lacking. Fistula patients tend to be young women, many of whom are married very early, of short stature, poorly educated, married to farmers or petty traders who themselves have little or no formal education (WHO, 2006a). They typically have had little or no access to prenatal care, and even if they have had access to antenatal screening, they have often nonetheless delivered at home attended by family members or traditional midwives. If they have sought help from trained midwives or medical doctors, this often occurs too late in labor after serious complications have already set in. (Wall et al., 2001).

Most authors agree that poverty, lack of access to health care, social status of women early marriage, harmful traditional practices and sexual abuse are among the major

causes of obstetric fistula. Similarly the WHO classifies the major causes of obstetric fistula into the following categories:-

### **2.2.2. Physical Causes Obstetric Fistula**

Obstetric fistulae are predominantly caused by a very long or obstructed labor which can last several days or sometimes, over a week before the woman receives obstetric care or dies. This can be regarded as an immediate cause of obstetric fistula. Other physical causes may be pelvic surgery, sexual abuse before reaching physical maturity, malignancy, radiotherapy or a combination of these although these have been found to be very rare in the developing countries (UNFPA, 2003).

**Lack of Access to Maternal Health Care** - It is the lack of appropriate health care, specifically the lack of appropriate healthcare for pregnant women in developing countries that is responsible for the widespread prevalence of this devastating condition in certain areas of the world today (Wall, et al, 2001). In resource-poor countries, the vast majority of the women who die, or who develop fistula during childbirth, do so because they did not receive the health care that they needed. This may be due to a lack of basic health-care provision or through, for whatever reason, inability to access the local health-care services (WHO, 2006b).

Skilled care before and after birth, and particularly during labor, can make the difference between life and death for women and their babies, and can help to prevent obstetric fistula. Yet only half of the women in developing countries receive assistance from a skilled attendant during delivery (WHO, 2006b). This view is also shared by Wall (1995), who emphasized that the major contributing factor is lack of adequate midwifery services and proper obstetrical care to deal with labor complications. In developing countries there are a mere 20% of women receiving

antenatal care and deliveries by skilled assistants is only 8 % (Ministry of Health, 2004).

Accessing suitably equipped facilities for antenatal care and safe childbirth is usually difficult, especially in rural settings where health centers able to provide basic emergency obstetric care may be 70 kms away and there is no easy or affordable form of transport. Wall asserts that, VVF in Africa are the result of “Obstructed labor and obstructed transportation” (Wall, et al, 2001). Even where such centers exist, there is often a lack of accessible referral facilities further away that can provide comprehensive emergency obstetric care such as a caesarean section (WHO, 2006a).

Assessments of basic and comprehensive emergency obstetric care in a number of Anglophone and Francophone African countries, conducted recently by United Nations Population Fund (UNFPA) and United Nations Children’s Fund (UNICEF), found that each country had one comprehensive emergency obstetric facility per 500, 000 inhabitants, but none had the required number of facilities for basic emergency obstetric care. Further, only 8.2–35% of women with complications in labour received care at an appropriate facility (UNFPA and Engender Health, 2003).

### **2.2.3 Social Causes Obstetric Fistula**

UNFPA and Engender Health (2003) report on recent needs assessments conducted in 21 countries underscored the fact that marginalization due to gender and socio-economic inequality lies at the root of the condition. The assessments found that poor, young, illiterate women from remote areas are disproportionately affected by obstetric fistula. WHO (2006a) classifies the underlying social causes as poverty, early marriage and childbirth, the role and status of women, other harmful traditional

practices and sexual violence and lack of knowledge about or facilities for fistula repair.

With regard to poverty, while the immediate causes of obstetric fistula is obstructed labor, pervasive poverty is a major underlying cause. Women who suffer from obstetric fistula tend to be impoverished, malnourished, lack basic education and live in remote or rural areas. Like many other women in remote areas of poor countries, most women who develop untreated fistula give birth at home, without assistance from skilled birth attendants (WHO, 2006b).

Nutrition is very vital for all human beings to grow well and become healthy, particularly for women who have begun their menstrual cycle and for women who are pregnant. Women who are nourished are most likely to suffer complications, severe bleeding and premature labors than those who are well fed (Tigest, 2007) developing countries women are among the most malnourished in the world. And this has an adverse effect on their overall health status and the outcome of their pregnancy. The mean height of Arid areas women is only 156 cm and about 4 percent are under 145 cm (7 percent of those women aged 15-19), and 30% of these women have a Body Mass Index (BMI, indicator of current under nutrition) less than 18.5 indicating serious energy deficiency and a very high risk of complications at delivery (Tigest, 2007). In addition, in most parts of the women suffer from the cultural beliefs and food taboos that prohibit them from eating nutritious foods resulting in their under nourishment (Tigest, 2007).

Rahmat (2001) shares the same opinion that poverty and gender discrimination result in under-nourishment and poor physical development, particularly of girls. Education is an important instrument to accelerate the process of social change. Many studies

indicate that education, particularly for women, leads to better child and reproductive health, lower fertility, reduced maternal mortality and decrease in the rates of early marriage in the developing world. Lack of education results in poor intake of antenatal services; and where the services are available, girls are unaware of the importance of utilizing the service (Rahmat, 2001).

Early Marriage and Childbirth - The WHO (2006a) states that most fistula cases occur among women living in poverty in traditional cultures, where a woman's status and self-esteem may depend almost entirely on her marriage and ability to bear children. Indeed, in most African societies, Motherhood is an essential goal of marriage.

Early marriage is widespread in developing countries. In many cultures, the tradition of marrying daughters at an early age is common. Female children, often undervalued, regularly married to much older men. The traditional practice of early marriage contributes to the risk of obstructed labor and fistula. In parts of Sub-Saharan Africa and South Asia, where obstetric fistula is most common, women often marry as adolescents, sometimes as young as ten years of age, and many become pregnant immediately thereafter, before their pelvises are fully developed for childbearing. There is little awareness of the need to delay the first pregnancy, or to space pregnancies well apart to enable the mother to recover and gain strength before a subsequent pregnancy (WHO, 2006a).

Girls aged 10-14 are five times more likely to die in pregnancy or childbirth than women aged 20-24 and many of these deaths take place within marriage (UNICEF, 2005). First births have elevated risks; the youngest first-time mothers and their children are especially vulnerable to poor health outcomes. Among married girls aged 15-19 in Kenya, almost half have already given birth (Ibid).

#### **2.2.4 Prevalence of Obstetric Fistula**

Historical records show that the Egyptians dating back to 2000 BC knew cases of fistulas and a still preserved mummy of a queen demonstrates what appears to be a Vesico- Vaginal fistula (Walley and Kelly, 2003). The suffering of women who developed obstetric fistulas was intense, and their cases were regarded as hopeless because there was no effective therapy for this condition. This situation changed in 1849 when Dr. J. Marion Sims developed a consistently successful surgical operation for this problem. With Dr. Sims, the modern era of gynecologic surgery began.' Although we now take his achievement for granted, in the 19th century Sims was feted, lionized, and celebrated by women throughout the Western world (Wall, et al, 2001). The rise of obstetrics as a specialty in medical science, together with the gradual provision of trained midwifery and delivery services for the entire population, has made the obstetric fistula almost unknown in the United States and the rest of the industrialized world today (Zachrain, 2000).

In the industrialized world, this condition is now uncommon: many gynecologists will go through their entire careers and never see a Vesico-Vaginal fistula (Wall, 2001). However, obstetric fistula is still prevalent in the developing world today. Various studies indicate that the prevalence of obstetric fistula reaches epidemic proportion in some parts of Asia and sub-Saharan Africa and a similar high prevalence of obstetric fistula has been reported from Nigeria, Chad and Sudan (Mulu and Williams, 1997).

The World Health Organization estimates a prevalence of at least two million women living with obstetric fistula and an annual incidence of 50,000 to 100,000 cases, although almost no population-based surveys on fistula have yet been undertaken and data remains scarce. In sub-Saharan Africa the incidence of obstetric fistula has been

estimated to be about 124 cases per 100,000 deliveries in rural areas, compared with virtually no cases in major cities (WHO, 2006b). Some in-depth studies serve to support the widely held belief that the true number of women living with untreated fistula and suffering the consequent pain and degradation may have been underestimated, suggesting that there may be between 100, 000 and one million women living with fistula in Nigeria alone and over 70,000 in Bangladesh. Other studies in Ethiopia, Nigeria and other parts of West Africa estimate the incidence of fistula to be 1–10 per 1 000 births. Obstetric fistula is the single greatest problem of maternal morbidity in West Africa (Wall, 1995).

### **2.2.5 Maternal Mortality and Obstetric Fistula**

Worldwide more than half a million healthy young women die from complications of pregnancy and childbirth each year. Virtually all such deaths occur in developing The WHO (2006b) estimates that, globally, over 300 million women currently suffer from short or long-term complications arising from pregnancy or childbirth, with around 20 million new cases arising every year. Problems include infertility, severe anemia, uterine prolapse and vaginal fistula. Worldwide, obstructed labor occurs in an estimated 5% of live births and accounts for 8% of maternal deaths. Adolescent girls are particularly susceptible to obstructed labor, because their pelvises are not fully developed (WHO, 2006a).

The problem of obstetric fistula formation is linked directly to that of maternal mortality.

The vast majority of fistulas are due to obstructed labor. Not surprisingly, obstetric fistulae are most prevalent in areas where maternal mortality is high and where obstructed labor is a major contributor to maternal deaths. These are areas where



access to emergency obstetric care is poor; correspondingly, accurate epidemiological information is also poor in these regions, a continuing point of difficulty in the evaluation of maternal mortality in general and in the evaluation of obstetric fistulas in particular (Wall, et al, 2001). Women with fistula are living indicators of failed maternal health systems (UNFPA, 2003).

## **2.3 Empirical Review**

### **2.3.1 Demographic characteristics**

Studies also show that socio-economic characteristics of women such as maternal education, economic status, and place of residence have an impact on the risk of fistula. Maternal education has been found to be a protective factor against the risk of obstetric fistula (Donnay and Weil 2004; Johnson 2007; Muleta and Fantahun,. 2007). The reasons underlying this association include the fact that education may directly improve an individual's knowledge, as well as ability to process information, regarding healthy pregnancy behaviors. Another important determinant of fistula in sub-Saharan Africa is the socioeconomic status of the woman (Bangser 2006; Johnson 2007; Meyer et al., Ascher-Walsh et al. 2007; Norman, Breen et al. 2007). The same study showed that obstetric fistula predominately occurs among women with low economic status compared to their better-off peers, Moreover, living in rural areas put women more at risk of developing fistula, because not only are they marginalized in terms of health infrastructures but also because they often live in remote areas, too far from clinics to receive timely care (Cook, and Dickens, 2004; Wall, 2006; Johnson, 2007).

Several studies that have been conducted demonstrate and present closely similar characteristics for women who live with fistula leave alone their geographical

attachment. In a study conducted in Malawi (Johnson, 2007), results show that lack of education, poverty, rural residence and sexual violence are associated with obstetric fistula. Studies also show that socioeconomic characteristics of women such as maternal education, socioeconomic status, and place of residence have an impact on the risk of fistula. Maternal education has been found to be a protective factor against the risk of obstetric fistula (Johnson, 2007; Muleta & Fantahun, 2007). Research has further shown that obstetric fistula predominantly occurs among women with low economic status compared to their better-off peers (Johnson, 2007; Bangser, 2006). Besides, living in rural areas put women more at risk of developing fistula, because not only are they marginalized in terms of health infrastructures but also because they often live in remote areas, too far from clinics to receive timely care (Cook and Dickens, 2004).

Educational levels of fistula patients ranged from no education to fourth grade at the highest. Studies further indicate that the mean age of the fistula repair patients is 27 years (range 17\_37) and that fifty-three percent of the women were divorced. The remainder was either married (33%) or widowed (13%) (Creanga and Ahmed, 2007). The average age at marriage for these women was 15.5 years (range 12-20), while the average age of the first pregnancy was 16 years (range 15-21). The majorities were unable to read or write and only two had received any formal education. A review of the characteristics nine hundred obstetric fistula patients in Northern Nigeria found that the typical patient was small and short; had been married early but was now divorced or separated; was uneducated, poor, and from a rural area; had developed her fistula as a prima gravida during a labor that lasted at least 2 days and which resulted in a stillborn fetus (Wall et al., 2004).

Inequality that exists between men and women in the social, political, and economic arenas is also manifested in their health status. Although both men and women are equally exposed to a number of health problems, women are more vulnerable to certain health hazards due to their role in child bearing and rearing, and their lower status in the society. Women are particularly exposed to many health problems associated with early marriage, pregnancy, childbirth, rape, abduction, other traditional harmful practices like female genital mutilation and gender violence (Ruth, 2007). As a result of these factors women are exposed to higher risks of morbidity and mortality. Every year over half a million women die in childbirth and pregnancy related complications and an estimated 300 million women in developing countries are currently suffering illnesses from complications of pregnancy and childbirth (WHO, 2006b).

Considered as one of the most severe maternal morbidities, obstetric fistula represents both a medical, economic and social crisis for the women affected and their communities. Obstetric fistula is a hole in the birth canal involving the urinary bladder and sometimes the rectum usually caused by obstructed labor without prompt medical intervention, usually a caesarean section. The woman is left with chronic incontinence and in most cases, a still born baby (UNFPA, 2006).

The literature on obstetric fistula is extremely scarce in the social sciences regardless of the gravity of this health condition. To date, there are only a few research articles that have been conducted from a population perspective in a developing country setting, in which the author has used the 2005 Malawi Demographic and Health Survey (Johnson 2007). Results from this study suggest that a lack of education, poverty, rural residence and sexual violence are associated with obstetric fistula in

Malawi. Based on evidence from Johnson (2007) and on information from the medical literature, obstetric fistula appears to be linked to the biologic characteristics of women, the social factors and the cultural context in the developing world.

A certain number of biological factors have been identified as covariates of obstetric fistula. In this regard, height, weight, and small pelvic size have been cited to be linked to the risk of obstetric fistula (Creanga and Ahmed, 2007). The authors reported that women with a height less than 146cm and a weight of 50kg or less are more likely to experience fistula. Similar evidence were reported by Wall, et al., (2004) based on a retrospective study using medical records of all women who had obstetric fistula at the local hospital in Jos (Nigeria) between January 1992 and June 1999. Wall and colleagues found that of 899 fistula cases, 75 percent had a height less than 150cm and a weight less than 50kg. The body of literature suggests that malnutrition in childhood and adolescence might interfere with growth, leading to stunted stature and underdevelopment of the pelvis, which in turn can impede pregnancy outcomes (Wall and Karshima, 2004; Creanga and Ahmed, 2007).

### **2.3.2 Cultural context in relation to obstetric fistula**

The cultural context appears also to play a role in the risk of obstetric fistula. With respect to cultural factors, early marriage and early childbearing are often cited as predisposing factors of obstetric fistula (Meyer, et al. 2007; Muleta, and Fantahun, 2007; Sombie, Kambou et al. 2007; Tsui, Creanga and Ahmed, 2007). In many African societies, early marriage is a cultural norm. Parents seek to marry daughters early to protect them against premarital sexual activity and unintended pregnancy. Since early marriage and early childbearing are strongly correlated in developing countries, young girls become pregnant right after marriage, potentially without full

development of their pelvis, which may increase the risk of developing fistula (Kurz 1997). Women's autonomy is another determinant of obstetric fistula (Cook and Dickens, 2004; Wall 2006). In patriarchal societies like in sub-Saharan Africa, the male is habitually the one who decides important family matters; women do not take part in any household decisions, even when it is related to their own health. The lack of autonomy has an impact on the time frame to seek care, because women need permission from their spouse, or even their in-laws to go to a hospital, which can delay emergency care.

Besides, the literature argues that female genital mutilation –a harmful traditional practice –increases the risk of fistula (Mahran 1981; Davis, Ellis et al.,1999). In its different forms, female genital mutilation results in impaired female genital tract which ultimately endanger the health of the mother.

Socially accepted norms of behavior and the roles women play in their families can have profound effects on the type of economic activities in which women can engage, the technologies available to them, the people and agencies with whom they can interact, the places they can visit, the time they have available and the control they can exert over their own capital, Muleta, et.al., 2008.

In settings where socio-cultural norms restrict women's mobility, their interactions with members of the opposite sex and their ability to attend trainings or receive formal education, women's access to information, institutions and markets is compromised. This is the case when women are not allowed to use public transportation, when they cannot afford to pay for it or when they cannot get away from their household responsibilities (Aina, 2006). It is also the case when women are prevented from interacting directly with men other than close relatives, or when they

feel awkward doing so, limiting their participation in agricultural or financial training and their ability to benefit from working with extension agents and veterinarians, most of whom are male and primarily address other men (Aina, 2006 and Eshuet *et al.*, 2005). As a result of these constraints, rural women tend to get their information from informal networks of women, reinforcing the gender gap in access to information. The gap can be substantial: recent work to quantify it using data from Paraguay compares husbands' and wives' knowledge of financial markets and finds that rural women are 15 to 21 percent less likely than men to have basic information about the financial institutions in their communities (Fletschner, 2008).

Even when they have access to information on the financial services and market opportunities available to them, women may be less equipped to process it. Their lower levels of literacy and lack of exposure to other languages, especially relative to male family members, hampers women's ability to benefit directly from information that is provided in writing or in languages other than those they speak at home (UNDP, 2007) and to fully understand the conditions of complex financial products available to them (Brown, 2001). This matters as demonstrated by Cole *et al.*'s (2009) experimental work in India and Indonesia that finds financial literacy is a strong predictor of demand for financial services.

Social norms also define the type of economic activities in which women can engage the amount of time they can invest in them and the markets they can access. In most rural communities, activities tend to be sharply segregated by gender (Muleta and Fantahun, 2007). Women are typically responsible for cooking, childcare, laundry, cleaning and the collection of water and fuel wood (Fletschner, 2008). While the gendered division of labour within agricultural production varies locally, men are

typically in charge of tilling, ploughing, fumigating and selling crops to wholesale traders, and women tend to do most of the animal husbandry and the processing of agricultural or animal products (Fletschner, 2008 and World Bank, 2008). In aquaculture and fishing, men are the primary fishers, while women mend nets, collect shellfish, smoke and dry fish for sale, and sell at local markets (World Bank, 2008).

Women's ability to undertake entrepreneurial activities that depart from well-established social norms is influenced by whether or not a sufficiently large group of women engage in comparable enterprises. As a result, each woman's economic opportunities are shaped not just by their own individual access to financial resources but also by whether those other women are able to obtain the capital they need (Fletschner, 2008).

Cultural norms and family dynamics can also limit women's ability to exercise control over the savings they have or the semi-liquid assets they own. Anderson and Balland (2002) hypothesize that one of the reasons for the high level of female participation in rotating credit and savings associations (ROSCAs) is that this socially accepted strategy to save allows women to protect their savings from husbands and other relatives. Alternatively, women may choose individual savings programs that allow them to keep details or even knowledge of these savings to themselves to avoid being subjected to pressure from others.

Finally, social traditions can leave women in a particularly vulnerable position since, in addition to the risks associated with pregnancy and childbearing, women are more likely to experience domestic violence, to experience greater hardships in case of divorce and to lose their assets when their spouses die (Creanga and Ahmed, 2007).

### **2.3.3 Psycho-social and economic conditions faced by obstetric fistula women**

#### **attending hospitals**

Patients with obstetric fistula, who have complications such as uncontrollably and continuously leak urine and/ or stool, do not only suffer from physical discomfort, but it may also have a great negative impact on the person's emotional well-being. Many of the women with vaginal fistula have to deal with shame, embarrassment and humiliation in many societies in Africa, where the woman's social status is a lot depending on her ability of child bearing. Some are even forced to leave their marriages, because of the stigmatization. It appears that the rates of separation or divorce increases with the time the woman still suffer from fistula, especially in those cases when she remains childless. The psychological impact of this condition should never be underestimated. Low self-esteem, feelings of rejection, stress, anxiety, loss of libido and loss of sexual pleasure, and even depression and suicidal thoughts are some psychosocial consequences that can follow this morbidity (De Ridder et al, (2009).

Virtually all the studies into the case of obstetric fistula are conducted from the medical point of view. Treatment, correction, and repair of obstetric fistula is possible, however, due to high cost involved, a majority of the victims are unable to afford the cost for the treatment, in this case, their physical, social and mental conditions are worsened. The devastating complication of obstetric fistula is the psycho-social consequences victims have to put up with, the major problems being incontinence, childlessness, divorce and poverty. Often times the victims become social outcast with suicide sometime a terminal event. Because of the lower social status of women in Nigeria, the attitudes displayed by the society towards obstetric fistula victims are without sympathy, and this is further complicated by their husbands



abandoning them. Another view to the worthlessness of obstetric fistula victims in the society is seen from the perspective of their economic irrelevances. Since a majority of obstetric fistula victims comes from the rural areas where farming is the mainstay of economy and subsistence for each household, it is expected that women should contribute their labour in cultivating the family land. However, and due to the obstetric fistula condition, victims are no longer able to contribute to the economic productivity of their household; instead they become an economic burden. The inability of the victims to satisfy their husbands' sexual desires, produce offspring and contribute to the economy of their household ultimately lead to the collapse of the marriage (WHO, 2006a).

#### **2.4 Theoretical framework.**

This study utilized interrelated theories as a theoretical framework due to the fact that no single theory is able to explain the total variance of human needs and survival due to the complexities of human behavior. The study utilized feminist theories, social exclusion theories, capability approach and intersectionality approach. This study made in depth qualitative observations and analysis with victims to invigorate denial of capability due the psychological, social, and economic consequences of exclusion and stigmatization on the basis of social exclusion and capability theoretical approaches developed by (Sen, 2002). Women with fistula are not only physically debilitated but are also in need of rehabilitation and reintegration programs to restore their personal and community life. Such programs should encompass psychological, social and economic considerations to comprehensively address their needs. This study see obstetric fistula as far beyond a medical issue and assertively believe that the victims demand access to those post treatment programs to restoring their capability for a better future.

The physically traumatizing scenario of fistula hampers the proper bodily functions of the victim and hence denies her full potential, necessitating the involvement of Martha Nussbaum's capability approach for critical analysis of the observations (Sen, 2002). Consequently, from a feminist stand-point, the study also identifies gender specific regimen of programs required by women with fistula in order to successfully reintegrate them into the society. Feminist theories: In this section, feminist theories pertinent to the topic of the study were discussed. Radical feminists are of the opinion that woman's rights to decide on their own body and reproductive lives as human beings should be respected and protected (Tong, 1998). They assert that patriarchy (Societal system where men are thought to be superior to women and women are subordinated and oppressed) is hindering women from excelling in the different aspects of life and that it is the basis of their oppression. Accordingly, as mentioned earlier morbidities such as obstetric fistula and its underlying causes such as early marriage, sexual violence and the low status of women in the society emanating from patriarchal views are hindering women from attending schools, socializing, engaging in the public activities and attaining economic independence for themselves Sen and S. Batliwala (2000).

Radical feminists also assert that access to information is integral to a woman's ability to make important decisions regarding her health (Sugatan, 2006). Deeply embedded cultural and social values, systems of beliefs continue to form barriers which prevent women from obtaining the necessary information to manage their own lives and bodies (WHO, 2006a).

Liberal feminists assert that education is the base for the advancement of women contributing to their freedom from oppression. Mary Wollstonecraft, one of the

earliest renowned liberal feminists was greatly interested in women's accessibility to education and believed that winning the right to an education greatly increased women's battle for "personhood" (Metko, 2000). Women make up the majority of the world's illiterate population and this could be attributed to their family and societies marrying them off at an early age even before they could go to school. Studies have confirmed that well informed women are more likely to use antenatal care services and avoid complications such as obstetric fistula during pregnancy than those that are not. Therefore women's deprivation of education and information is likely to lead them to sufferings such as obstetric fistula.

Simone De Beauvoir a well known existentialist feminist, in her book entitled the "The Second Sex" elaborated the oppression of women and their being disregarded as human beings. Her words in this book best describe the situation of women with obstetric fistula. Most of the time young women are forced to marry older men without their consent, and are thus subjected into child bearing and family responsibilities that their body is not ready for. Here the girl is seen as 'the other', 'the inessential' and has no say over her own reproductive life and is totally disregarded as a person. As mentioned earlier, in marriage women have less autonomy and decision making power in most cases and they do not have the freedom of consent when to give birth and when to enter into sexual relations (Ministry of Health, 2004). Usually they give birth at a very early age and this increases their risk of exposure to childbirth complications such as obstetric fistula.

Socialist feminist theory focuses on both the public and private spheres of women's lives and argues that liberation can only be achieved by working to end both economic and cultural sources of women's oppression (Buchanan, 2011). Cultural

practices with harmful effects on women and those that increase the risk of obstetric fistula, such as early marriage, female genital mutilation are among the ways in which women are being subordinated and oppressed. Unless the society works to change these beliefs and cultural norms, eradicating obstetric fistula will be impossible.

They assert that economic independence is the key for women's liberation from their oppression and subordination in the society (Buchanan, 2011). In most cases of obstetric fistula, women are economically dependent on their husbands and when abandoned by their husband, they are left in total poverty (Faces of Dignity, 2003). Women with obstetric fistula who have been abandoned by their husbands are often left in total destitution and are economic burdens to other people. Obstetric fistula has a negative impact on the economic lives of women leading them into an even deeper state of poverty.

Also the eloquent descriptions of power and sexuality by Michel Foucault a well known philosopher of the 20th century can be linked to the situations of women with obstetric fistula. In his work of the history of sexuality (Foucault, 1978), Foucault seeks to analyze the formation of practices that inscribe power on the body, that limit human freedom in some way. Such practices are not inscribed from above; rather such inscriptions and codes come into being through discourses that circulate through culture and society. In women he shows how in our world, the woman's body is recurrently seen only for its reproductive abilities. The status of women in the society where fistula has occurred is usually set according to the childbearing and rearing responsibilities. Hence, once they are fistula victims they are isolated and stigmatized by the society and they are of no use anymore.

Women's Employment Status - Dependence on men for economic survival has been a principal barrier to women's control over their reproductive behavior in developing countries. Empowering women with more economic participation and control in their households and communities might be the key to their achieving control over their own reproductive health. Employment can increase women's economic autonomy and reproductive health status because it raises awareness and provides new ideas, behavior and opportunities through interaction with other people outside the home and community (Sharma et.al 2007, p.674).

One study in Kenya (Magadi et., al 2000) reported that the antenatal care visits tend to start earlier for women in paid employment. They are likely to have greater knowledge about pregnancy and childbirth due to freedom of movement outside household. They also tend to seek information on services available for pregnancy care during work. However, employment may not necessarily be associated with greater use of maternal health care, like in Nepal (Sharma et.al 2007), because non-working women may be better off than working women. In the context of developing countries, women's work is largely poverty induced and is likely to have a negative impact on utilization of maternal health services.

Social Exclusion: The researcher used the ensuing description of social exclusion as reviewed in Sen and Batliwala (2000) noting that to be excluded one should be excluded from the following major elements: " livelihood; secure, permanent employment; earnings; property, credit, or land; housing; minimal or prevailing consumption levels; education, skills, and cultural capital; the welfare state; citizenship and legal equality; democratic participation; public goods; the nation or

the dominant race; family and sociability; humanity, respect, fulfillment and understanding” (Sen (2000)).

Social exclusion has been located within the field of poverty studies as a form of capability deprivation. This conceptual connection provides equal theoretical foundation for the approach to social exclusion and helps us to expand the realistic use of the approach (Sen, 2002). According to Sen, poverty is the lack of certain basic capabilities to do something. In my view, fistula victims are not supported by the society to participate in any role. Moreover, they are not emotionally supported to face the stigma related to the offensive smell or contamination of urine as a result of incontinence. This ultimately serves to end access to the community and hence they hide in darkness, living at the mercy of their family members to survive from day-to-day. Moreover, poverty includes not only income and material absence but a multidimensional dynamic experience consisting of vulnerability and exclusion. The major non material aspects to be considered are the segregation of the poor from participation in any way into opportunities and activities. Thus, this study strongly believe that the prevailing stigma and discrimination experienced by the women with fistula falls under the domain of the broader conceptual framework of social exclusion.

**Capability Approach:** In this study, the fistula victims were looked in terms of their history of disability due to the complication and their potential for reintegration. In that regard, it was significant to use Nussbaum (2005) capability approach. Health is a major issue in Sen’s capability approach, whether it is considered a part of an individual’s well-being or whether health equity is considered as a part of the justice of social arrangements (Sen, 2002). According to Sen, physical impairment is an

example of the personal characteristics that should be taken into account in assessing poverty and personal well-being. Sen argues that the goal of human development and poverty reduction should be to expand the capabilities that people have in order to enjoy their „valuable doings and beings“. This description has been collectively coined as functioning and it further suggests that poverty is not just related to income-deprivation but individual capability as well.

In this study, the researcher used also Nussbaum approach as she criticized Sen's approach as not gender sensitive/specific enough and gives less emphasis to body's health and integrity. Nussbaum (2005) dictates that two of the capabilities denied by the victims of obstetric fistula could be a lack of bodily health and integrity as manifested by being unable to have good health.

Therefore, her approach could implicitly narrate the living experiences of these women from a gender sensitive perspective and the repercussions of the physical experience of their functioning. Both, Sen and Nussbaum reiterated that a lack of self esteem and deprivation of decision making capabilities could exacerbate poverty. In this research these theoretical frameworks are used to investigate the salient ingredients for restoring confidence and building on opportunities for a successful recovery from the psychological and socio-economic devastation of stigmatization, exclusion and impoverishment.

Similarly, according to Nussbaum (2006), all beings are equally capable provided the social contract provides an avenue to realize that potential. Hence the capability approach is a helpful framework for defining disability. Under the capability approach, disability may be analyzed at two levels, as a deficiency of capabilities or as a deficiency of functioning. At the level of personal characteristics, this study used

the concept of disability as a physiological, mental, or anatomical loss. In terms of capabilities and functioning, deficiency is the relations between the resources accessible to the person, their personal characteristics (e.g., impairment, age, gender) and the environment in which they live (Mitra 2006). Therefore, physical body integrity and hence the right to have an intact body is as important and it is one of the capabilities in the total characteristics of being and functioning. Thus, restoring the physical ability of these women is a leap towards reclaiming their proper social order augmented by concomitant psychosocial therapies. As a result, the researcher believes that applying Sen's and Nussbaum's capability approach helped to analyze how victims are capable and resilient to deal with their vulnerability.

**Intersectionality Approach to Analyze Women's Experiences:** This study used the extensive definition of gender given by Joan Scott (Scott, 1986) that gender is social consciousness ascribed to the sexual differences between men and women with respect to their physical, mental, moral and emotional representations as defined by nature for their roles and activities. The experience of women with fistula cannot be described and analyzed only in terms of gender because gender does not function in a vacuum. To that end, the study employed Collins (1990) theory of intersectionality. Her matrix of domination, from a feminist perspective, envisions intersectionality as different identities that flow together and result in identity politics; power relations that will result in different forms and practices of exclusion and discrimination; different social advantages and disadvantages; and finally, hierarchies and privileges.

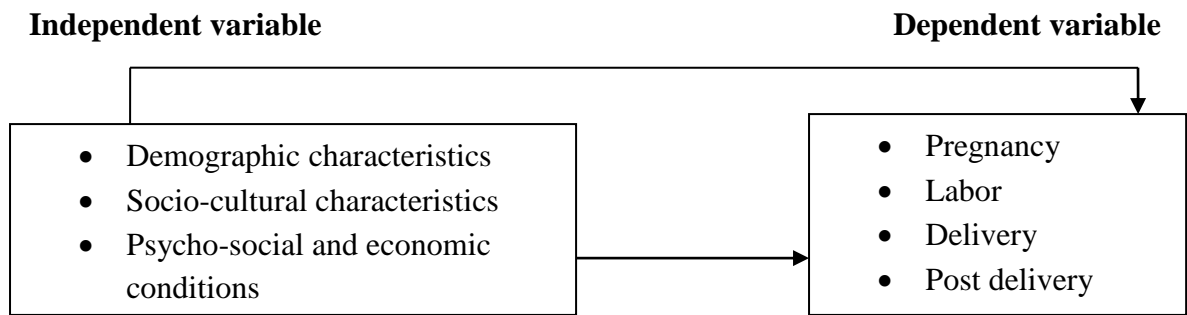
The researcher looked at the intersections of meanings and intersectionality of the situation of the women with fistula. Recognizing the fact that obstetric fistula occurs only to women suggests that both sex and gender have a strong relationship to the



occurrence of fistula and the subsequent socio-economic consequences. Unequal gender relations are the major factor in relation to social inclusion and exclusion. The agency of women with fistula and their capability to cope with life intersects with factors like gender, power politics related to body integrity, marriage, age, class, religion, sexuality and disability. For instance, under development of the woman's pelvis because of her prematurity is the cause of labor obstruction and hence lack of knowledge of reproductive biology is another intersecting factor. In addition, the body physical feature of the victims, i.e. the bad odour coming from urinary incontinence often results in exclusion and stigmatization from society. The socio-economic class of the woman may have also an impact in the inclusion and exclusion of their experience. If the woman has gotten treatment in the very beginning of the condition she might not suffer from social exclusion.

## **2.5 Conceptual Framework**

This study was based on conceptual relationship between the independent and dependent variables where pregnancy, labor, delivery, post-delivery of women is itemized as dependent variable and demographic characteristics of women, socio-cultural characteristics of women and psycho-social and economic conditions was itemized as independent variable. The diagrammatic relationship between the variables is summarized in the figure 1.1.



**Figure 1:1 Study conceptual framework**

The independent variables include demographic characteristics of women, socio-cultural characteristics of women and psycho-social and economic conditions. The study used Likert-type scale (1-5) where 1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree to assess the effects of independent variables on pregnancy, labor, delivery, post-delivery of women. An aggregate measure of effects of independent variables on pregnancy, labor, delivery, post-delivery of women was obtained by aggregating the mean score measures of women fistula experiences indicators.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

Research methodology refers to the manner of collecting research data (Burns & Grove, 2005). The chapter focuses on the study area, methodological and procedures and modalities in data collection. The current study assessed socio-economic implications of obstetric fistula among women treated at Gynocare Fistula Centre, Eldoret- Kenya. This chapter describes the study design, study population, sample selection, sample size, data collection tool, data collection technique and ethical consideration.

#### **3.2 Study Sites/Population**

The study was conducted at Gynocare Fistula Centre, Eldoret in Uasin Gishu County in Rift Valley, Kenya. Gynocare Fistula Centre is within Eldoret Central Business District. Gynocare Fistula Centre is a 25 bed capacity facility. The Centre has a 25-bed obstetric fistula special ward established in 2010 and receives clients on a regular basis. The patients are operated from the main hospital theatre that now doubles as VVF/RVF theatre. Gynocare Fistula Centre is the only recognized fistula repair centre in North and South Rift of Rift Valley. Women who attend the obstetric fistula Centre at Gynocare Fistula Centre mainly come from the entire Rift Valley, Western region, Nyanza including, Uganda, Somalia and Sudan. Since its inception, the Centre has reported an increasing number of women with obstetric fistula seeking repairs from 150 in 2011 to 300 in 2014. The centre is supported by One by one and NGO and fistula foundation also an NGO both based in USA.

A study population refers to the aggregate of cases that conform to the designated criteria (Burns & Grove, 2005). The study population was women with VVF/RVF who met the inclusion criteria. A target population is the entire set of individuals or elements who meet the sampling criteria (Burns & Grove, 2005). The target population in this study was all women with fistula seeking repair services Gynocare Fistula Centre Eldoret. The accessible populations were those available in Gynocare Fistula Centre Eldoret during the time of study. The study population comprised of all women with fistula seeking repair services at the Gynocare Fistula Centre Eldoret from June, 2010 to current year 2014. Due to uniqueness of this particular morbidity and the stigma associated with its perceived causes and effects on a woman's overall life, the study could only access patients through close collaboration with Gynocare Fistula Centre surgical teams and abides to their schedules.

### **3.3. Study Design**

This was a descriptive study conducted in close collaboration with Gynocare Fistula Centre surgical team. Face-to-face administered questionnaires were conducted to new and follow up clients who visited the institutions for obstetric fistula surgical repairs and on follow up visits after surgical repairs. The study was descriptive because study observed and described the the demographic characteristics of women seeking obstetric fistula repair service at the Gynocare Fistula Centre in Eldoret, socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret and the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret.

A method of "triangulation" (mixed method) was adopted for data collection where relevant information for the conduct of the field research for the study was collected.

The mixed method involved both quantitative method (using structured questionnaire) and qualitative method (using key informants interview). The study adopted mixed method due to the fact that mixed method share the goal of creating a better understanding of psycho-social and economic conditions faced by obstetric fistula women. Quantitative research are more structured and characterized as involving the study of a few variables on a large number of entities Cresswell (2003). The qualitative approach was chosen for this study because it provides room for extensive narrative data which the participants can give verbally (Yin, 2003). Cresswell (2003), states that qualitative approach focuses more on understanding the meaning the participants have formed about their world and their experiences in a particular context and point in time. The researcher therefore, believes that mixed method of data collection meet the requirements for the study.

#### **3.4. Data collection tools/Methods**

Data collection is a precise, systematic method of gathering data relevant to research or of addressing research objectives, and research questions or hypotheses (Burns and Grove 2005). Data was collected by means of questionnaires and key informants interview (triangulation approach). Triangulation approach is chosen because it offers the use of different research techniques giving many advantages. Denzin et al., (1970), for example, suggested that the use of triangulation approach offers greater validity and reliability than a single methodological approach. Dixon et al. (1988) state that most hypotheses and research objectives can be researched using more than one technique of data collection; providing detailed data about the phenomenon being investigated. Therefore the following instruments namely: questionnaires and key informants interview were used.

**Questionnaires:** Questionnaires were found appropriate for gathering the views of a large number of people about a particular phenomenon (Neuman, 2000). Questionnaires were used to gain an understanding of social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret- Kenya.

The questionnaires contained various items that solicited for responses pertaining to research variables. Questionnaires had both open and close-ended questions with either Yes or No answer or True or False alternatives. The instrument also contained unstructured items that captured the opinion, feelings and suggestions of the respondents. Questionnaires was divided into four sections: section A: Socio-demographic data, section: B: demographic characteristics of women seeking obstetric fistula repair service at the Gynocare Fistula Centre in Eldoret, section C: socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret and section D: the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret. The researcher administered a comprehensive questionnaire with both open and closed ended questions to respondents that cut across women seeking obstetric fistula repair service at the Gynocare Fistula Centre in Eldoret. The closed ended questionnaire was in form of Likert scale (1-5) where 1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree. Questionnaires were preferred because of their ability to reach a large number of respondents within a short time and to elicit personal ideas from the respondents due to the openness of some questions (Kothari, 1990). Pre-testing of questionnaires was used to measure the reliability and validity of the questionnaire items and for improving the quality of questions before the main study. A sample of the questionnaire was provided as appendix B.

**Key informants interview:** The study used key informants interview to collect information from key informants drawn from two nurses, one doctor, one administrator and two social work officers in order to verify the reliability of the information gathered through questionnaires and personal observation. To obtain detailed information on the respondents the researcher was assisted by two trained research assistants. At the end of every interview, responses were checked to ensure all the questions were answered so as to avoid return visits to respondents' homes. The advantage of an interview is that the respondents provided in-depth information which is not possible to get using a questionnaire. In the interviews, confusing questions were clarified. It was also possible to probe for more information. This technique was useful in seeking in-depth information that could not be captured in the questionnaires. The personal interview approach creates confidence on the part of the respondents and as they gained interest in the subject, more reliable, valid and objective results were realised. The interviews were informally conducted through discussions using a set of structured questions (see appendix C).

**Validity:** To ensure the quality of data collection instrument, it is important to establish its validity and reliability. Validity refers to the degree to which the instrument will measure what it is supposed to measure (Polit & Beck, 2008). Validity was upheld with the tool used which reflected the factors under study. Validity of the instruments was measured by justifying each question in relation to the objectives of the study. When the study was conducted, there was uniformity and conformity in the way the questions were asked. The questions were written in simple and clear language.

**Reliability:** Reliability is the degree of consistency or dependability with which an instrument measures an attribute (Polit & Beck, 2008). The interview schedule was prepared in such a way that it had sections with different questions measuring the same characteristics. Reliability of the instrument was measured by conducting a pilot study. The results from the pilot study were used as baseline data to test reliability. Amendments to the instrument were made and helped in eliminating biases and minimized errors during data collection.

**Pilot Study:** A pilot study is a smaller version of a proposed study conducted to develop or refine the methodology, such as the treatment, instrument, or data collection process (Burns & Groove, 2009). Pilot study was done at the Gynocare Fistula Centre in Eldoret using women with VVF who were admitted to the hospital at the time of the pilot. Convenient sampling was used to select the respondents and was interviewed using the structured interview schedule. The hospital was selected because it is a VVF repair centre. Fourteen (14) women with VVF/RVF were selected for the pilot, which is 10% of the sample population. On the whole, the respondents understood the questions. On the Socio-demographic data, one question was rephrased and three questions were added. The rephrased question was 'post fistula marital status' to: 'were you divorced when you started leaking urine'? Added questions were; how many times have you had VVF, before the current repair, how many attempts of VVF repairs you have ever had and how far is your home from the health care facility. Some open ended questions were closed.



### 3.5 Sample Size Determination.

Sampling is a process of selecting a portion or sub-set of population on which research will be conducted, in order to ensure that conclusions from the study are generalized to the entire population. The population being large, the sampling procedures was adopted. In order to determine the sample size a random sampling technique were used based on the average number of patients treated at Gynocare Fistula centre per year which was around three hundred, the study used the estimated fistula rate calculated by Mabeya (2003) and adopted from Fisher's formula for rural west Pokot that is the possibility of there being a fistula rate of 1 per 1000 deliveries. Thus the Fisher's formula was used to determine the sample size is as follows:

$$N = z^2 pq / d^2$$

N=the desired sample size

Z=the standard normal deviate (in this study 1.96 corresponds to 95% CI)

p=the proportion in the target population with certain characteristics (0.1).

q=1.0-p

d=degree of accuracy desired (0.05)

$$N = 1.96^2 \times 0.1 (1.0 - 0.1) / 0.0025 \quad n = 138$$

Two nurses, two doctors, one administrator and two social work officers were included as key informants. This was rounded off to a minimum of 140 respondents.

#### 3.5.1 Inclusion and exclusion criteria

**Inclusion criteria** - All women with fistula who have suffered as a result of obstructed labour and were seeking repair services at Gynocare Fistula centre and were available during the study period and consented to participate in the study.

**Exclusion criteria** - Women with fistula who were seeking repair services at the fistula repair centre at Gynocare Fistula centre and were unable to give information. These

included the very sick, the deaf and mentally disturbed. Also, among Exclusion criteria were the women who suffered fistula resulting from causes other than obstetrics, which may include trauma due to rape congenital malformation among others.

### **3.6 Data Management and Analysis**

The data collected for the purpose of the study were adopted and coded for completeness and accuracy. Statistical Package for Social Sciences (SPSS) version 22, software and Microsoft Excel were used for all the data analysis and interpretation. The data were analyzed statistically using descriptive analysis techniques encompassing frequency distribution; percentages, mean, median and standard deviation were used. In order to describe the background characteristics of the study participants, descriptive statistics were used. Categorical variables (such as sex, education, marital status) including variables that were dichotomous (yes/no), were summarized in form of frequencies and proportions. Continuous variables (such as age, distance, time with Obstetric Fistula etc) were summarized as means, standard deviations, minimum and maximum values. Categorical variables were summarized using proportions and frequencies. Data are presented in tables and charts.

Inferential statistics was employed to examine the relationships between independent and dependent variables. Correlation coefficient analysis was conducted to determine the relationship between independent variable, and dependent variable in the stated hypothesis. The hypotheses were analyzed using T-test, ANOVA test, multiple regression analysis and Pearson correlation analysis. Linear regression as a statistical technique was used to examine the way a number of independent variables relate to one dependent variable. Multiple regressions are a statistical technique used to examine the way a number of independent variables relate to one dependent variable. These procedures attempt to predict a single dependent variable from any number of

independent variables entered into regression equations. The Multiple Regressions Analysis was used to determine the relationship between predictor variables and criteria variables.

### **3.7 Ethical Issues**

Keeping in line with fundamental principles guiding ethical decisions, permission and approval to carry out the study was sought from the IREC (see appendix 6). Also consent was sought from director of the hospital and the research participants. The study complied with the following principles which aim at protecting the dignity and privacy of every individual who were requested to provide personal or professionally valuable information about him/her or others (hereinafter referred to as a subject of research). The nature and the purpose of the research were explained to the respondents by the researcher before undertaking the research. The participants were assured of anonymity of their identity and responses confidentiality and voluntary participation. The identity of individuals from whom information were obtained was kept strictly confidential. No pressure or inducement of any kind was applied to encourage an individual to become a subject of research.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS AND RESULTS**

#### **4.1 Introduction**

The aim of this chapter was to analyze the empirical data collected through the questionnaires in order to provide a real picture about the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret, Kenya. This chapter present an analysis of the data gathered using the tools discussed in the previous chapter. The Statistical Package for Social Scientists (SPSS) 22.0 for windows was used to derive the descriptive and inferential statistics relevant to this study. The chapter focuses on the analysis, interpretation and discussion of the study findings. The results of the data analysis are reported systematically in four phases. This chapter includes 4 main sections. The first is test of normality. The second is about descriptive analysis (the demographic and personal characteristics) which were presented and discussed in terms of mean scores and standard deviation. The third and final section presents results of the measures of associations between the variables. The findings that respond to these questions and objectives were discussed and compared to previous findings in other studies.

#### **4.2 Preliminary Screening of data.**

##### **4.2.1 Response rate and missing data**

The data contained responses from the questionnaire and the interview schedule. A total of 138 questionnaires were returned out of the 141 that were given out. Three questionnaires were not properly filled and were therefore excluded from the final tally. A total of 138 questionnaires were therefore used in the data analysis. Missing value analysis (MVA) was performed to check for patterns of missing data and the sizes of the missing values. Missing value analysis was designed to highlight patterns

of missing values as well as to replace them in the data set. The missing value analysis results showed that the percentage of missing values was less than 3%. Considering the comparatively to the sample size, this percentage of missing values was not serious and the values were therefore replaced with the series mean of the items in question. This was consistent with most studies with large sample sizes given that almost any procedure for handling missing values was expected to yield similar results (Saunders *et al.*, 2007).

#### 4.3 Test of Normality for the study variables

Statistical methods were used to examine the normality distribution of the independent and dependent variables using SPSS. The statistical method used was the Kolmogorove- Smirnov test. Kolmogorove- Smirnov test is used to identify if the data follow normal distribution or not, this test is considered necessary in case testing hypotheses as most parametric Test stipulate data to be normality distributed. Consequently, the test was used to identify variables that significantly deviate from a normal distribution.

**Table 4.1: Kolmogorov - Smirnov test**

Items	Kolmogorov-Smirnov	
	Statistic	P-value
Pregnancy, labor, delivery, post delivery of women	0.975	0.718
Factors influencing choice and use of Gynocare Fistula Centre	0.976	0.720
Demographic characteristics of obstetric fistula patients	0.973	0.635
Socio-cultural characteristics of obstetric fistula patients	0.973	0.619
Psycho-social and economic conditions	0.971	0.633
All paragraphs of the questionnaire	0.991	0.996

As shown in Table (4.1) for Kolmogorov-Smirnov test of normality, the p-value for each of the variables is greater than 0.05 level of significance and then the distribution for each field is normally distributed. Consequently, parametric tests are used to perform the statistical data analysis.

#### **4.4 Descriptive Analysis of the Sample Statistics**

This section of the thesis focuses on the descriptive analysis, presentation and description of the research findings. This section provides descriptive analysis of factors influencing choice and use of Gynocare Fistula Centre. It also focused on demographic characteristics of the respondents in the study. Furthermore, socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret and the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret were also analyzed.

##### **4.4.1 Socio- Demographic Data of women admitted with obstetric fistula**

This section consists of three tables. It covers the demographic characteristics, history of obstetric fistula data and obstetric characteristics.

###### **4.4.1.1 Demographic Data of women admitted with obstetric fistula**

Demographic characteristics were used as a basic for further analysis of the specific research objectives and their findings using descriptive statistics, bar chart, pie chart and percentages. Demographic analysis was performed, since demographic phenomena affect respondents' social and economic behaviour.

The demographic characteristics for the sample of respondents included include age, occupation, religion, marital status, education, main sources of income, income per month, place of residence, and parity of women with OF, distance to health facility

and other fistula related factors. Table 4.2 - 4.4 presents' summary statistics of the socio-demographic characteristics of women with obstetric fistula

**Table 4.2: Demographic characteristics of women with Obstetric Fistula**

<b>Characteristic</b>	<b>frequency</b>	<b>Percentages</b>
<b>Number of years of living with OF:</b>		
2-9 years	92	67.0
10-39 years	40	29.0
40 years & above	6	4.0
<b>Age at interview</b>		
15 – 20yrs	101	73.0
21– 70 yrs	37	27.0
<b>Parity of women with OF</b>		
Para 1 (primipara)	87	63.0
Para 2-6	51	37.0
<b>Level of Education</b>		
No formal education	28	20.0
Primary education	92	67.0
Secondary education	14	10.0
Tertiary	4	3.0
<b>Marital status</b>		
Married	65	47.0
Single	41	30.0
Separated/Divorced	24	17.0
Widow	8	6.0
<b>Occupation of respondents</b>		
No Gainful employment	56	40.0
Self employed (small retail)	45	33.0
Subsistence (peasant)	37	27.0
<b>Distance to health Facility:</b>		
Less than or equal to 1 hour walk	51	37.0
Less than or equal to 2 hours walk	28	20.0
Less than or equal to 3 hours walk	15	11.0
Less than or equal to 4 hours walk	9	7.0
Less than or equal to 5 hours walk	6	4.0
More than 5 hours walk	29	21.0
<b>Main source of income</b>		
Subsistence (peasant)	96	70.0
Self employed (small retail)	28	20.0
No source of income	14	10.0
<b>Income per month</b>		
No income	23	16.9
I don't know	76	54.9
Less than 100ksh/day	25	18.0
More than 100ksh/day	14	10.2
<b>Place of residence</b>		
Rural	117	85.0
Urban	21	15.0

As shown in the Table 4.2, the socio-demographic characteristics of women with OF. Majority of the women were below 20 years of age (101; 73%) had primary education (92; 67%), and were subsistence (peasant) (96; 70%). Nearly half of the women (65; 47%) were currently married. Two-thirds of the women (92; 67%) had lived with OF

for 2-9 years. The distance from their homes to Eldoret ranged from 35 to 70 kms. The median age of the OF patients (women) at the time of interview was 27 years (range of 15- 70 years) while the median at the time they sustained fistula was 18 years (range 13 – 70 years) Some of the respondents (51, 37%) reported that it took them one hour or less to walk to the health care facility while (29, 21%) walked for more than 5 hours. Their main source of income (96: 71.0%) was earned from subsistence farming. With regard to religion, the majority of the study participants were Christian (90.7 %,) followed by Muslim (9.3%). The study identified the majority of cases were reported in rural areas (85 percent) of the country; 15 percent were urban resident. This study showed that more than 54.9 percent of the participant didn't know their family income. The other 16.9 percent didn't have any income and the remaining 18 percent of the participants' income was below 1 USD per day.

#### **4.4.1.2 History of Obstetric Fistula Data**

This section provides the finding from the respondents on History of obstetric fistula data. This information was paramount because it shed light on the medical condition in which a fistula (hole) develops between both the rectum and vagina or between the bladder and vagina after severe or failed childbirth due inadequate medical care. An examination of the questionnaire responses for each of the 138 respondents revealed the data in table 4.3 below.



**Table 4.3: History of Obstetric Fistula Data**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>	
<b>Age OF developed (years):</b>	15-25 years	96	70
	26-39 years	35	25.0
	40 years above	7	5.0
<b>Divorced when OF developed:</b>	Yes	20	83.0
	No	4	7.0
<b>Cause of OF:</b>	Prolonged Obstructed labour	61	69.0
	Operation	29	21.0
	Witchcraft	4	3.0
	Instrumental delivery	4	3.0
	Vaginal tears	3	2.0
	Urinary catheter	3	2.0
<b>No of times had OF</b>	One	124	90.0
	Two	11	8.0
	Three	3	2.0
<b>Number of fistula repair attempts:</b>	One	22	16.0
	Two	4	3.0
	Three	4	3.0
	Four	3	2.0
	Never	105	76.0

Table 4.3 shows that majority of the respondents (70%) developed OF between the ages of 15-25 years and (83%) were divorced when they sustained OF. Majority of the respondents (69%) stated that their OF was caused by prolonged obstructed labour. Almost all of the respondents (90%) were diagnosed with OF for the first time.

#### **4.4.1.3 Obstetric Characteristics.**

This section provides the finding from the respondents on obstetric characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret. This information was paramount because it shed light on the causes of fistula and medical condition in which a fistula develops on patient. An examination of the questionnaire responses for each of the 138 respondents revealed the data in table 4.4 below.

**Table 4.4: Obstetric characteristics of women with Obstetric Fistula**

Variable	Frequency	Percent of respondents	
<b>Parity:</b>	None	56	41.0
	One-three	61	44.0
	Four-Six	14	10.0
	Seven- nine	4	3.0
	More than nine	3	2.0
<b>Number of antenatal visits during previous pregnancy:</b>	One	11	8.0
	Two	11	8.0
	Three	26	19.0
	Four	54	39.0
	More than four	28	20.0
	None	7	5.0
	Not sure	1	1.0
<b>Delivery place:</b>	Hospital	111	80.0
	Clinic	9	7.0
	Home	15	11.0
	Not applicable	3	2.0
<b>Delivery attendant:</b>	Skilled Birth Attendant	120	87.0
	Trained Traditional Birth Attendant	4	3.0
	Relative	7	5.0
	Friend	7	5.0
<b>Labour duration:</b>	Less than 24 hours	39	28.0
	More than 24 hours	95	69.0
	1 week	4	3.0
<b>Cause of OF (hospital records):</b>	Ruptured Uterus	14	10.0
	Prolonged Obstructed Labour	76	55.0
	Caesarean section	7	5.0
	4 <sup>th</sup> /3 <sup>rd</sup> degree tear	3	2.0
	Health facility was far from my home	4	3.0
	Doctor's scissors hit me during CS	14	10.0
	Health worker tampered with my bladder	20	15.0

Table 4.4 shows that majority of the respondents (44%) had one to three children while (41%) had no living children. More than one third of the respondents (39%) attended antenatal clinic four times in the most recent pregnancy that resulted in the development of obstetric fistula. Majority of the respondents (80%) delivered at the hospital while (7%) were attended to by skilled birth attendants during delivery. More

than two thirds of the respondents (69%) were in labour for more than 24 hours. The cause of obstetric fistula according to hospital records for majority of the respondents (55%) was due to prolonged obstructed labour is responsible for the fistulae they have while (15%) thinking that it is the health workers that tampered with their bladder thus causing them fistula.

#### 4.4.2 Socio-cultural characteristics of obstetric fistula patients attending

##### Gynocare Fistula Centre in Eldoret

An examination of the questionnaire and interview schedule responses pertaining to the socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret for each of the respondents revealed the information shown in table 4.5.

**Table 5: Socio-cultural characteristics of obstetric fistula patients**

Item	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Social structure of society	29%	34%	18%	10%	9%
2	Women status in family and community	26%	29%	18%	14%	13%
3	Level of literacy skills (Education)	24%	27%	16%	18%	15%
4	Harmful traditional practices	23%	30%	22%	16%	9%
5	Attitudes, norms, values, beliefs, practices, and perceptions of people	28%	23%	19%	17%	13%
6	Social and cultural norms	25%	28%	22%	15%	10%
7	Knowledge regarding family planning and safe motherhood	31%	26%	18%	14%	11%
<b>Percentage mean</b>		<b>26%</b>	<b>28%</b>	<b>19%</b>	<b>15%</b>	<b>11%</b>

**Source: Survey data, 2014**

Based on respondent responses, as shown from the table 4.5, a cumulative total of 63% agree that Social structure of society influence the context in which fistula occurs in obstetric fistula patients. A cumulative total of 55% agree that Women

status in family and community while only 27% disagree. Regarding whether level of literacy skills influence the context in which fistula occurs in obstetric fistula patients, 51% agree while 33% disagree. In regard to whether harmful traditional practices influence the context in which fistula occurs in obstetric fistula patients, a cumulative total of 53% agree while a cumulative total of 25% disagree. Concerning whether attitudes, norms, values, beliefs, practices, and perceptions of people influence the context in which fistula occurs in obstetric fistula patients, 51% agree while a cumulative total of 30% disagree. On social and cultural norms, 53% agree while a cumulative total of 25% disagree. With regards to whether Knowledge regarding family planning and safe motherhood influence her sexual and reproductive health outcomes, including her risk for obstetric fistula, 57% agree while a cumulative total of 25% disagree. These results of the findings show that most of the respondents in the study sample were in agreement that Socio-cultural characteristics of obstetric fistula patients influence the context in which fistula occurs in obstetric fistula patients. The mean responses index of 54% indicates that a majority of the respondents agreed Socio-cultural characteristics of obstetric fistula patients' influence the context in which fistula occurs in obstetric fistula patients.

#### **4.4.3 Psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret.**

An examination of the questionnaire and interview schedule responses pertaining to the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret for each of the respondents revealed the information shown in table 4.6 - 4.7.

**Table 6: Psycho-social conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret**

No	Statements	Strongly agree	Agree	Disagree	Strongly disagree	Not sure
1	Social isolation	29%	31%	17%	14%	9%
2	Divorce or abandonment /separation	29%	37%	13%	10%	11%
3	Ridicule and shame due offensive odour	31%	18%	29%	9%	13%
4	Inability to start a family/ sustain family	26%	33%	15%	14%	12%
5	Risk of violence Lack of opportunities for work	32%	29%	15%	11%	13%
6	Prone to illness-urinary tract (stones)	31%	35%	16%	11%	17%
7	Stigmatization	29%	31%	15%	12%	13%
8	Rejection, dejection and loss of social support	26%	29%	15%	14%	16%
9	Loss of baby	34%	35%	16%	9%	6%
<b>Percentage mean index</b>		<b>25%</b>	<b>27%</b>	<b>20%</b>	<b>16%</b>	<b>12%</b>

Base on responses from the table 4.4, a cumulative total of 60% of the respondents sampled strongly agreed that they obstetric fistula women attending Gynocare Fistula Centre faced social isolation, 31% disagreed. Similarly, a cumulative total of 66% agreed on divorce or abandonment / separation against a cumulative total of 21% who tended to disagreed. Regarding whether obstetric fistula women faced ridicule and shame due offensive odour, a cumulative total of 59% of the respondents sampled agreed while a cumulative total of 22% disagreed.

The item regarding whether obstetric fistula women inability to start a family had cumulative total of 59% agreed while a cumulative total of 26% disagreed. On whether obstetric fistula women face the risk of violence lack of opportunities for work, a cumulative total of 61% respondents tended to agree against a cumulative total of 24% who disagreed. Regarding whether obstetric fistula women are prone to illness-urinary tract (stones), 66% agreed while 28% disagreed. As to whether

obstetric fistula women experience stigmatization, 60% tended to agreed while 25% tended to disagreed. Concerning whether obstetric fistula women face rejection, dejection and loss of social support, a cumulative total of 54% of the respondents agreed while 29% disagreed. Concerning whether obstetric fistula women experience loss of baby, 69% agreed while a cumulative total of 15% disagreed. The findings show that most of the respondents in the study sample were in agreement that obstetric fistula women patients face Psycho-social and economic conditions due to the nature of the illness. The main social challenges experienced by women with OF were bad smell failure to attend social gatherings such as church loss of marriages and isolation. The mean responses index of 52% indicates that a majority of the respondents agreed the social challenges experienced by women suffering from obstetric fistula.

Twenty of the 138 women interviewed, several of whom were students, had been involved in casual relationships that ended when the girl's partner knew she was pregnant. Of the remaining 118 women, 59 were separated or divorced after the onset of the condition. Some of these women were abandoned by their partners, who indicated that they could not tolerate being with a woman who leaked urine and manifested an offensive odor, suggesting she had lost all sexual appeal and value. As one woman explained:

*With my first husband, we had no sexual interactions because he said that he felt nausea due to the urine leaking from my vagina. I became doubtful about the relationship. I could no longer ask him to have intercourse, and he also did not want it anymore.*

Other women left their partners of their own accord, stating they were no longer fit to be in a relationship, were concerned that sexual relations might aggravate their condition, or simply were not interested. One woman said:

*As the first man mistreated me, I no longer have interest in men. Moreover, my situation does not permit that a man be with me. I am embarrassed to sleep with a man with my urine problems.*

A lot of women returned to their natal homes, where they were generally cared for and protected. Several women remained with their original partners, who they said generally treated them with respect. Interestingly, four women who had been rejected by their original partners later established new relationships with other men who accepted their condition. All women who remained in relationships were obligated to have sexual relations, with many indicating that they had to endure a lot to satisfy their husbands.

The majority women limited their movement to the village and their immediate surroundings, indicating that it was difficult and painful to travel and that they only traveled when it was necessary, such as to seek treatment, to visit a market to sell or buy goods, or to participate in special ceremonies, such as a family marriage or funeral, where they felt obligated to pay their respects. In general, most respondents stopped participating in ceremonies.

Although rural residents generally continued to engage in agriculture, they were forced to reduce their economic activities, thus becoming more dependent on family members. Women who had small businesses either sent family members or only went to the market for short periods. Good number women continued to receive visits from friends, and they could visit friends in their homes, but only for short periods, due to

the leaking urine and odor. Some women added that certain former friends insulted or avoided them. When circulating in the community, many women were commonly ridiculed, particularly by female rivals, and called names such as “somebody who leaks urine all the time,” “instead of controlling urine, urine controls you,” and “you wear diapers but we don’t see any children.” Mockery often centered on the fact that they were childless, signifying that their position in society was reduced or that they had been abandoned by their partner and were living in their natal household, also symbolizing a loss of honor.

Women described the shame they felt due to being incontinent and smelling of urine, forcing them to seclude themselves in their homes in an attempt to hide the condition and avoid the risk of inciting humiliation. Others suggested that the stigma attached to the condition fostered blatant rejection, resulting in a life of isolation. Whether this isolation was self-imposed or inflicted by others, virtually all indicated that their lives and status as women were destroyed. The following quote illuminates common themes of rejection experienced:

*My life is ruined; I have become like a crazy woman who must live alone cut off from the world. I live far from my parents, my village, and my husband, in order to escape the noise (insults and questions) of others and to look for a cure.*

#### **4.4.4 Economic conditions faced by obstetric fistula patients**

An examination of the questionnaire and interview schedule responses pertaining to the economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret for each of the respondents revealed the information shown in table 4.7.



**Table 7: Economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret**

No	Statements	SA	A	U	D	SD
1	Lack economic empowerment.	28%	31%	20%	12%	9%
2	Poverty	29%	28%	8%	19%	16%
3	Limited access to health facilities that might offer high-quality antenatal and delivery care	31%	41%	18%	8%	2%
4	Long distances to health facilities and a lack of resources	27%	26%	16%	18%	13%
5	Risk of gainful employment	29%	35%	20%	9%	7%
6	Accessibility to social / community services	33%	31%	18%	10%	8%
7	Drop in women participation in income generating activities	34%	35%	16%	9%	6%
8	Having no income or low income	26%	30%	10%	19%	15%
<b>Percentage mean index</b>		<b>30%</b>	<b>32%</b>	<b>17%</b>	<b>12%</b>	<b>9%</b>

As shown in the table 4.7, eight key items on economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre were identified. A cumulative total of 59% of the respondents agreed that obstetric fistula women lack economic empowerment. A cumulative total of 57% agreed that obstetric fistula women experienced poverty while only 35% disagreed. Poverty and gender inequality were evident throughout the study assessments. The data illuminated grave disparities in the quality of life between poorer and wealthier women. Poverty and women's status had a negative impact on access to family planning and skilled care, as well as maternal health outcomes. Finally all the studies identified poverty is the root cause for delay to seek treatment.

Regarding whether obstetric fistula women have limited access to health facilities that might offer high-quality antenatal and delivery care, 72% agreed and 10% disagreed. Research findings showed that most women who developed fistula tended to live in rural, low-resource areas with limited access to health facilities that might offer high-quality antenatal and delivery care. On whether obstetric fistula women trek long

distances to health facilities and a lack of resources, a cumulative respondent's total of 53% agreed while a cumulative total of 31% disagreed. Long distances to health facilities and a lack of resources added to delays in getting quality care in the case of complications during labour.

On whether obstetric fistula women face risk of gainful employment, a cumulative total of respondents 64% agreed while a cumulative total of 16% disagreed. As shown in table 4.2, twelve (40%) women reported that they were not involved in gainful employment. Those that were working (33%) were involved in small businesses to help them raise funds to meet medical costs and other basic needs of life. They were not involved in businesses that required strict hygiene, such as working in restaurants or selling food. Health care givers indicated that, on average, treating OF costs Kenyan shillings 80,000 organizations for this treatment which these patients could not afford. The women interviewed as part of this study were sponsored by charitable organizations for this treatment. Women with OF reported spending an average of Kenyan Shillings 1,000 per day on basic needs within the home; this cost was met by families, relatives and "will wishers.

On whether women with OF have access to social/community services, 64% agreed while a cumulative total of 18% disagreed. 85% of the women with OF resided in rural area. Therefore, there is a decrease in almost all community services accessed by women with fistula compared to when they had not sustained fistula leave alone the differing levels of decrease for different community services. There is a decrease in accessing health facility medical services for example even when one would expect an increase in number of women going to health facility for medical services given the women's condition.

Concerning whether there is drop in women with OF participation in income generating activities, 69% agreed while a cumulative total of 15% disagreed. Major reasons given by the women for such a profound decrease of women involvement in income earning activities after fistula ranged from having foul smell (49% table 4.4) among women with fistula, people laughing at them and non willingness of people to buy from the women with fistulae

On whether women with OF have no income or low income, A cumulative total of 56% agreed that obstetric fistula women experienced poverty while only 34% disagreed. The studies included in this section of literature review revealed victims of obstetric fistula patients were young, illiterate and poor women with significantly lack economic empowerment. The studies also expressed, having no income or low income affected the health seeking behavior of women and difficulty to put money for any complications that might happen during pregnancy, labour and post delivery. The findings show that most of the respondents in the study sample were in agreement that women with OF faced adverse economic conditions when seeking treatment in hospital and this affect their health seeking behavior. The mean responses index of 53% indicates that a majority of the respondents agreed that women with OF faced adverse economic conditions when seeking treatment in hospital. It is the combination and accumulation of these factors that affect women with OF healthy seeking behaviour in hospitals.

#### **4.5 Bivariate Analysis**

Bivariate analysis is geared more towards explanatory purposes. Bivariate correlation analysis was used to test for measures of association between variables. The study was tested using Pearson's Correlation Analysis test to establish the association

among the study variables. Rules of thumb about correlation coefficient size were adopted.

**Table 4.8: Rules of Thumb about Correlation Coefficient Size**

Coefficient Range	Strength of Association
+0.81 - +1.00	Very strong
+0.71 - +0.80	High
+0.41 - +0.70	Moderate
+0.31 - +0.40	Small but explicit relationship
+0.01 - +0.20	Slight, almost negligible

\*Assumes correlation coefficient is statistically significant.

#### 4.5.1 Measures of Association between Independent Variables and Dependent Variable

##### Variable

Measures associations between the variables were investigated using Pearson correlation coefficients. Table 4.9 shows the results of this correlation

**Table 4.9: Measures association between variables**

		Obstetric fistula treatment	Demographic characteristics	Socio-cultural characteristics	Psycho-social and economic conditions
Obstetric fistula treatment	Pearson correlation	1			
Demographic characteristics	Pearson correlation	0.285**	1		
Socio-cultural characteristics	Pearson correlation	0.347**	0.345**	1	
Psycho-social and economic conditions	Pearson correlation	0.352**	0.266**	0.48**	1

\*\*correlation is significant at the 0.001 level (2 tailed)

\*\*correlation is significant at the 0.005 level (2 tailed)

Table 4.9 shows significant positive correlation among the independent variables and obstetric fistula treatment in particular; the results show that there is a positive correlation between demographic characteristics and obstetric fistula treatment

( $r=0.285$ ,  $p=.001$ ). There are also significant positive correlations between socio-cultural characteristics and obstetric fistula treatment ( $r=0.347$ ,  $p=.001$ ), between socio-cultural characteristics and demographic characteristics ( $r=0.345$ ,  $p=.001$ ) and between psycho-social and economic conditions and obstetric fistula treatment ( $r=0.352$ ,  $p=.001$ ) between psycho-social and economic conditions and demographic characteristics ( $r=0.266$ ,  $p=.001$ ) and finally between psycho-social and economic conditions and socio-cultural characteristics ( $r=0.266$ ,  $p=.001$ ).

These results depict that an improvement in demographic characteristics, socio-cultural characteristics and psycho-social and economic conditions are likely to result in high quality obstetric fistula treatment.

#### 4.5.2 Test of Hypotheses

**H<sub>0</sub>:** *There is no significant relationship between demographic characteristics of women and obstetric fistula treatment ( $p=.001$ ).*

**H<sub>1</sub>:** *There is a significant relationship between demographic characteristics of women and obstetric fistula treatment ( $p=.001$ ).*

Based on the Table 4.9, it shown the relationship between demographic characteristics and obstetric fistula treatment. Refer from the Table 4.8, this indicate that the strength of association between demographic characteristics and obstetric fistula treatment is high ( $r=0.285$ ,  $p=.001$ ). Thus, researchers reject the null hypothesis of no significant relationship between demographic characteristics of women and obstetric fistula treatment. Therefore, there is a significant relationship between demographic characteristics and obstetric fistula treatment.

**H<sub>0</sub>:** *There is no significant relationship between socio-cultural characteristics of women and obstetric fistula treatment (p=.001).*

**H<sub>1</sub>:** *There is a significant relationship between socio-cultural characteristics of women and obstetric fistula treatment (p=.001).*

Based on the Table 4.9, it shown the relationship between socio-cultural characteristics and obstetric fistula treatment. Refer from the Table 4.12, this indicate that the strength of association between socio-cultural characteristics and obstetric fistula treatment is high ( $r=0.347$ ,  $p=.001$ ). Thus, researchers reject the null hypothesis which says there is no significant relationship between socio-cultural characteristics of women and obstetric fistula treatment. Therefore, there is a significant relationship between socio-cultural characteristics and obstetric fistula treatment.

**H<sub>0</sub>:** *There is no significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment (p=.001).*

**H<sub>1</sub>:** *There is a significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment (p=.001).*

Based on the Table 4.9, it shown the relationship between psycho-social and economic conditions of women and obstetric fistula treatment. Refer from the Table 4.1.2, this indicate that the strength of association between psycho-social and economic conditions of women and obstetric fistula treatment high ( $r=0.352$ ,  $p=.001$ ). Thus, researchers reject the null hypothesis which says there is no significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment. Therefore, there is a significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment.

## 4.6 Multivariate Regression Analysis of obstetric fistula treatment predictor variable

### 4.6.1 Model Summary Results

Table 4.10 presents the summary results of the regression model.

**Table 4.10: Model Summary**

Model	R	R. Square	Adjusted R Square	Std. Error of the Estimate
1	543 <sup>a</sup>	0.295	0.26	0.29281

a. Predictors: (constant), Demographic characteristics, Socio-cultural characteristics and Psycho-social and economic conditions

As shown from the results R =543<sup>a</sup> R. Square=0.295 Adjusted R Square=0.26 and Std. Error of the Estimate=0.29281. multiple correlations r-coefficient indicates the degree of linear relationship of obstetric fistula treatment with all predictor variables, where as the coefficient of multiple determination R-square shows the proportion of the total variation in obstetric fistula treatment that is explained by the independent variables in the regression equation. The adjusted R-square takes into account the number of variable measure of total variation explained. The adjusted R-square value of 0.260 obtained in the current study means that only 26% of the total variance in obstetric fistula treatment is explained by variation in these independent variables other than the ones explored in this study that are more responsible for obstetric fistula treatment.

### 4.6.2 Test of significant of the model

Analysis of variance (ANOVA) was used to test for the significant of the regression model. This test was used to check of a linear statistical relationship existed between obstetric fistula treatment and at least one of the predictor variables. Table 4.11 shows the results of this test.

**Table 4.11: ANOVA Test**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean square</b>	<b>F</b>	<b>Sig.</b>
Regression	2.903	4	0.726	8.465	.000 <sup>a</sup>
Residual	6.945	81	0.086		
Total	9.848	85			

a. Predictors: (constant), Demographic characteristics, Socio-cultural characteristics and Psycho-social and economic conditions

b. Dependent Variable: Obstetric fistula treatment

As shown from the table 4.11 ( $F=8.465$ ,  $p<0.001$ ), the f test provides an overall test of significance of the fitted regression model. The F value of 8.465 indicates that all the variables in the equation are important and hence the overall regression is significant.

#### **4.6.3 Regression Results**

Results of the significance of the individual regression coefficient are represented in the table 4.12 below.

The study postulated relationship between psycho-social and economic conditions and obstetric fistula treatment. The regression analysis result indicated that psycho-social and economic conditions is a significant indicator of obstetric fistula treatment (Beta=0.465).the regression analysis result indicated that demographic characteristics, socio-cultural characteristics were significant at this 0.05 level of significance since the p-value fall below the significant level of 0.05.



**Table 4.12: Regression Coefficient**

Model	Unstandardized coefficients		Standardized coefficients	t	Sig
	B	Std. Error	Beta		
1.(constant)	1.383	0.918		1.506	0.136
Demographic characteristics	0.284	0.097	0.321	2.938	0.004
Socio-cultural characteristics	0.194	0.061	0.323	3.169	0.002
Psycho-social and economic conditions	0.595	0.141	0.465	4.226	0

Dependent variables: Obstetric fistula treatment

## CHAPTER FIVE

### DISCUSSION

#### 5.1 Introduction

Drawing from the findings of this study as shown in the previous section, this section provides a systematic discussion of these findings in light of the theoretical and empirical literature. The general objective of the study was to assess the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret-Kenya. The study sample comprised women with obstetric fistula who were receiving care at the t Gynocare Fistula Centre in Eldoret-Kenya. The study was prompted by the fact that obstetric fistula is commonly known as a preventable tragedy hence knowledge of the risk factors for occurrence; attitudes towards obstetric fistula prevention and self esteem among women with obstetric fistula are the key in the management of obstetric fistula patients. This chapter presents a discussion of data obtained from respondents through questionnaire and face to face interviews conducted at Gynocare Fistula Centre in Eldoret-Kenya.

#### 5.2 Discussion of the findings

The purpose of the study was to investigate the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret- Kenya. The findings of this work have been derived from the objectives and answers to the research questions. The responses to these questions are provided through the analysis of the collected data: The following summary of the findings were made. The studies have indicated a variety of background demographic characteristics of the respondents. This include: gender, age, marital status, education level, job title, and experience in the organization. In addition, the chapter discusses the study findings thematically in line with the objectives and in reference to existing

literature. Four thematic issues were analyzed. These included: demographic characteristics of women admitted with obstetric fistula at the Gynocare Fistula Centre; socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre and the psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre. Analysis of the respondents' questionnaire and interview responses revealed the following findings.

### **5.3 Comparison with previous studies**

#### **5.3.1 Objective No1: Demographic characteristics of women admitted with**

##### **Obstetric fistula at the Gynocare Fistula Centre in Eldoret**

Regarding the demographic characteristics of women admitted with obstetric fistula at the Gynocare Fistula Centre in Eldoret; this study identified ten key demographic characteristics for the sample of respondents. The findings show that most of the respondents in the study sample were below 30 years of age (73%) had primary education (67%), and were either self-employed or did not engage in any gainful employment (73%). Nearly half of the women (47%) were currently married. Two-thirds of the women (67%) had lived with OF for 2-9 years. The distance from their homes to Eldoret ranged from 35 to 70 kms. The median age of the OF patients (women) at the time of interview was 27 years (range of 15- 70 years) while the median at the time they sustained fistula was 18 years (range 13 – 69 years) Some of the respondents (37%) reported that it took them one hour or less to walk to the health care facility while (21%) walked for more than 5 hours. Their main source of income (71.0%) was earned from subsistence farming. The majority of the study participants were Christian (90.7 %). The study identified the majority of cases were reported in rural areas (85 percent). This study showed that more than 54.9 percent of the participant didn't know their family income. The other 16.9 percent didn't have any

income and the remaining 18 percent of the participants' income was below 100ksh per day.

Furthermore, the study finding shows that majority of the respondents (70%) developed OF between the ages of 15-25 years and (55%) were divorced when they sustained OF. Also, (55%) of the respondents stated that their OF was caused by prolonged obstructed labour. While almost all of the respondents (91%) were diagnosed with OF for the first time. Of those women who had OF repair attempt, the reason for multiple repairs was urine incontinence. In addition, (44%) had one to three children while (41%) had no living children. More than one third of the respondents (39%) attended antenatal clinic four times in the most recent pregnancy that resulted in the development of obstetric fistula. Majority of the respondents (80%) delivered at the hospital while (87%) were attended to by skilled birth attendants during delivery. (69%) were in labour for more than 24 hours. The major cause of obstetric fistula was due to prolonged obstructed labour.

Furthermore, the spearman rank correlation test between the ranks of the responses showed that demographic characteristics and obstetric fistula treatment are significant ( $r=0.285$ ,  $p=.001$ ). The regression result postulated relationship between demographic characteristics and obstetric fistula treatment. The regression analysis result indicated that demographic characteristics, socio-cultural characteristics were significant ( $p>0.05$ ). Thus, the null hypothesis which says there is no significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment was rejected. Therefore, there is a significant relationship between demographic characteristics and obstetric fistula treatment.

The finding is consistent with other findings of Mabeya (2003) on characteristics of women admitted with obstetric fistula in the rural hospitals in West Pokot, where age category 11-20 years presented the highest number of clients developing fistula at the birth of their first baby. This corresponds with (Njoroge *et al.*, 2004) on early sexual debut and high maternal morbidity and mortality, including fistula development. This same category is additionally unprepared to cope with the demands of pregnancy and child bearing (Njoroge *et al.*, 2004). In this study the risk of developing fistula was highest at first birth and decreased with increasing births down to the ninth birth. This concurs issues of vulnerability as cited by Mabeya in his analysis of data collected for one month at the KNH, where 26.6% of the women were 20 years and below and 81.3% were 30 years and below (Mabeya, 2003). These views imitate the findings of (Muleta, and Fantahun, 2007) study in Ethiopia found that OF patients were of an average age of 17years with a mean of 27 years. A total of 70% were shorter than 156 centimetres. A study conducted by the Women's Dignity project in Tanzania found the mean age of 23 years for women who developed fistula, with the youngest being 12 and the oldest 46 years. The majority of the women were 20 years and above when they developed their fistula. These findings are significant as they place emphasis on the common belief that fistula mainly occurs at a young age (Women's Dignity project and Engeder Health, 2006).

This view was further echoed through the findings of (Mabeya, 2003). According to the author, low levels of academic achievement determined, to a large extent, the occupation and income levels of the clients in this study. In this study, the majority 67% had low academic achievement and mainly engaged in farming and odd jobs that earned low income (70%). The vicious cycle of poverty once women developed fistula was therefore perpetuated. This concurs with Muleta's Ethiopia study where

only 30.8% had completed primary education and 59% of the fistula patients had no formal education and a majority 72% had no occupation.

A study by UNFPA and Population Council also found that women living with OF had a poor education background and were unlikely to be employed or engage in income generating activity (Warren and Mwangi, 2008). According to UNFPA obstetric fistula affects the most marginalized members of society, namely poor illiterate girls and women mostly aged between 13-20 years (UNFPA, 2003 and Engender Health 2005). Mabeya also found some association between poverty and clients with fistula. These factors are consistent with the famous three delays underlying maternal morbidity (UNFPA and Engender Health, 2003, Njoroge *et al.*, 2004). Kenya Demographic and health Survey 2008/09 also shows that a large proportion of women 59% continue to deliver at home.

### **5.3.2 Objective No2: Socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret**

Research question 2 sought to determine the socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret. The study identified seven key items crucial to socio-cultural characteristics of obstetric fistula patients. The results of the findings show that most of the respondents in the study sample were in agreement that socio-cultural characteristics of obstetric fistula patients influence the context in which fistula occurs in obstetric fistula patients. The mean responses index of 54% indicates that a majority of the respondents agreed Socio-cultural characteristics of obstetric fistula patients' influence the context in which fistula occurs in obstetric fistula patients. Furthermore, there are also significant positive correlations between socio-cultural characteristics and obstetric fistula treatment

( $r=0.347$ ,  $p=.001$ ). The regression analysis result indicated that socio-cultural characteristics are significant at this 0.05 level of significance since the p-value fall below the significant level of 0.05. Thus, the null hypothesis which says there is no significant relationship between socio-cultural characteristics and obstetric fistula treatment was rejected. Therefore, there is a significant relationship between socio-cultural characteristics and obstetric fistula treatment.

This overview examines the context in which fistula occurs, including social and cultural norms, the political setting, and the economic situation that often define women's lives. A girl's or woman's background and her role in her environment influence her sexual and reproductive health outcomes, including her risk for obstetric fistula. Cultural beliefs and social values prevented adolescent girls and women from making decisions about their own bodies as well as their health in all countries. Generally, women living with fistula had low literacy skills, low status in the family, and few years of schooling. Knowledge regarding family planning and safe motherhood was often limited and access to contraceptives restricted.

These views were further supported by the interview schedule. The cross assessments, large proportions of women delivered at home with extremely low rates of Caesarean births in rural areas. Among the women who gave birth at home, many were assisted by female family members or traditional birth attendants with no formal training. When complications arose during pregnancy, access to necessary obstetric care was often avoided or delayed due to family pressures for home deliveries and misperceptions of the causes of complications.

According to interview schedule, child marriage and early childbearing were the norm and increased vulnerability by contributing to gender inequities in education, work, and decision-making. Girls were married at their first menstrual flow (10 to 15 years old) in numerous countries, and as young as age 9 in Massai community of Kenya. These adolescent girls often had less access to reproductive health information and services, as well as contraceptives. Conversely, where cases of fistula were noted among older women with children, pregnancies were not well spaced and high fertility rates were prevalent.

These findings are consistent with the findings by (Kavai *et al.*, 2010) posited that culture and tradition play a major role in the lower utilization of maternal health services. Better employee had been determined as more productive employee. Job satisfaction is a result of how well worker could be performed in their job. It was observed in other study of (Kijugu, 2009) that cultural taboos and beliefs are mainly influenced by insufficient knowledge and awareness. This view was further echoed through the findings of Mabeya, (2003). According to the author, obstetric fistula is a health condition caused by the interplay of numerous physical factors and the social, cultural, political and economic situation of women. This interplay determines the status of women, their health, nutrition, fertility, behaviour and susceptibility to obstetric fistula. Mabeya (2003) observed obstetric fistula from the cultural/social context: lower status of women and girl's poverty, malnutrition, lack of education or no formal education, early marriage and early maternity and harmful traditional practices such as FGM.



### **5.3.3 Objective No 3: Psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret**

Regarding the psycho-social conditions faced by women admitted with obstetric fistula at the Gynocare Fistula Centre in Eldoret, this study identified nine key psycho-social conditions faced by obstetric fistula women. The findings show that most of the respondents in the study sample were in agreement that obstetric fistula women patients face Psycho-social conditions due to the nature of the illness. The main social challenges experienced by women with OF were bad smell failure to attend social gatherings such as church loss of marriages and isolation. The mean responses index of 52% indicates that a majority of the respondents agreed the psycho-social challenges experienced by women suffering from obstetric fistula.

Regarding the economic conditions faced by women admitted with obstetric fistula at the Gynocare Fistula Centre in Eldoret, this study identified eight key items on economic conditions faced by women suffering from obstetric fistula. The findings show that most of the respondents in the study sample were in agreement that women with OF faced adverse economic conditions when seeking treatment in hospital and this affect their health seeking behaviour. The mean responses index of 53% indicates that a majority of the respondents agreed that women with OF faced adverse economic conditions when seeking treatment in hospital. It is the combination and accumulation of these factors that affect women with OF healthy seeking behaviour in hospitals.

Furthermore, the spearman rank correlation test between the ranks of the responses showed that psycho-social and economic conditions of women and obstetric fistula treatment are significant( $r=0.352$ ,  $p=.001$ ). The strength of association between

psycho-social and economic conditions of women and obstetric fistula treatment was high ( $r=0.352$ ,  $p=.001$ ). Thus, researchers reject the null hypothesis. Therefore, there is a significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment. . The regression analysis result indicated that psycho-social and economic conditions is a significant indicator of obstetric fistula treatment (Beta=0.465).

These findings are consistent with the findings by (Donnay and Weil 2004; Johnson 2007; Muleta and Fantahun, 2007) posited that that socio-economic characteristics of women such as maternal education, economic status, and place of residence have an impact on the risk of fistula. It was observed in other studies of (Bangser 2006; Johnson 2007; Norman, Breen et al. 2007) that another important determinant of fistula in sub-Saharan Africa is the socioeconomic status of the woman. According to (De Ridder *et al* 2009), the psychological impact of this condition should never be underestimated. Low self-esteem, feelings of rejection, stress, anxiety, loss of libido and loss of sexual pleasure, and even depression and suicidal thoughts are some psychosocial consequences that can follow this morbidity.

This view was further echoed through the findings of (Ramsey et al., 2005). According to the author, Living with obstetric fistula means living with incontinence. This implies living with the stench, the inability to control one's urine or faeces as an adult, and often the inability to play the expected role of a woman, a wife or worker combined with misconceptions within the community about the cause of obstetric fistula. It brings with it acute and chronic social, economic and psychological consequences. The smell of urine and faeces that surrounds these women along with strong community misperceptions about the cause often results in isolation and

ostracism. The psychological consequences of obstetric fistula have as yet not been fully explored, but there is evidence that they may be severe. Accordingly, comprehensive treatment and rehabilitation necessarily includes mental health services, but reflection is required on what can be provided in low resource settings.

It was observed in other studies of (Moir, 1967; WHO, 2006a) that the devastating complication of obstetric fistula is the psycho-social consequences victims have to put up with, the major problems being incontinence, childlessness, divorce, poverty. Often times the victims become a social outcast with suicide. According to the authors, often a woman's role in family life centers on a strong obligation to satisfy the sexual needs of her husband and to provide him with offspring (WHO, 2006a). If a victim of obstetric fistula is fortunate enough to be in the same compound with her husband, they obviously do not share the same bed. This situation makes the sexual desire between the couple die out. Since victims can neither satisfy their husbands' sexual urge nor produce offspring, they become useless in the eyes of their husbands and even the society. Also because women in most African societies have accepted their low status role, the inability to produce children or satisfy their husband's sexual desire further destroy their own self esteem (WHO, 2006b).

The findings are similar to other studies (Women Dignity Project, 2007; Karugaba, 2003) that have shown that women with fistula often face economic hurdles in their life time after sustaining fistula that affects their normal wellbeing. Like in our study this study established that women are often chased away from their homes, without support from their husbands and without means of earning their livelihood amidst so many life needs including but not limited to medical costs, basic needs like soap used to wash their clothes all the time due to the foul smell.

#### **5.4 Challenges and Limitations**

The qualitative technique involves direct contact and in-depth interviews with the respondents. With the sensitivity of the study, including: gender differences; cultural differences and so on, there was a challenge in the use of this approach. Culture in relation to gender forced the researcher to train a female staff of Gynocare Fistula Centre Eldoret on qualitative interviewing to enable me gather sensitive data from some of the respondents.

Another important limitation encountered on the field was local language barrier. Some of the respondents were Pokts, Samburu and Luya speaking, and since I do not speak these languages, an interpreter who had to translate the response to me in English was used. There may have been a distortion, underestimation or exaggeration of issues described by the interviews, however, the information gathered were juxtaposed against literature earlier reviewed for guideline purpose. One important limitation of this study is what Onwuegbuzie & Leech (2004:777) refer to as “observer effect”. While interviewing the participants, the research team was almost sure of what their responses would be, however, this situation made the lived world experiences of the participants more meaningful to the study.

Also, the study was institutional based and the data used here was obtained from clients, institutional personnel and where possible, family members accompanying the clients. The researcher could only access the clients for data collection and other interactions during Gynocare Fistula scheduled medical clinics at the Eldoret Centre. The researcher had very limited opportunity to observe real social interactions of clients and family and community either before or after the repairs. The researcher

acknowledges this as the major limitation in the study because re-integration is a continuous process that would require long term follow up, probably lasting several years, after OF repairs. In order to minimize possible negative effect on the quality of the study the investigator made special effort to encourage discussions to get deeper into clients' perceived levels of re-integration through reports, inspirations and hopes for future. The investigator also made every effort to understand each client as an individual and their special desire to get assimilated back to society.

The study largely relies on life stories narrated by the victims themselves. By its very nature life histories based studies demand considerable time investment to thoroughly and meticulously narrate the situation. Therefore, the method chosen for this study is constrained by time factor to conduct further field work to rural places to analyze the rare situation of women cured from the complication and successfully re-integrated to their homes. Moreover, due to some of them being in their old age and other unforeseen psychological situations, some of the respondents had no clear cognitive map of the sequence of events back to the age of onset of the complication there by depicting the precarious nature of sole reliance on such methods of data generation.

## CHAPTER SIX

### CONCLUSION AND RECOMMENDATIONS

#### 6.1 Introduction

Obstetric fistula is a multi-layered, multifaceted experience for the person affected by it. On an individual level, treatment of obstetric fistula requires a holistic approach. Treatment goes far beyond the closing of a physical hole; it requires a complete system that helps prevent, treats and rehabilitates a person physically, socially, psychologically and financially. The information gathered in this study should be regarded as a complement to other information collected by other researchers with respect to the circumstances surrounding the prevalence of obstetric Fistula and its impact on the psychological well-being of the poor women. It is a complement in the sense that it gives the victims voices of their own, a situation which is lacking in several other reports, and a majority of which are quantitative and medical care focus.

There is reduction in participation of women with fistula in community groups, with only few of them are able to continue participation after sustaining fistula. Economic implications of Obstetric Fistula to women as indicated from this study include loss of income, leadership roles in community development groups and self esteem that make many women with the condition disembark their income generating activities. Stigma associated with OF causes the clients to live a life of isolation and many lost their livelihoods as a result. Therefore successful repair of fistula brings a lot of joy and a renewed hope not only for the survivor but also to her immediate family. There is however, the need to assist the fistula survivors fit back into community life by equipping them with skills that they can use to become financially empowered. An empowered woman will take charge of her health matters and those of her family;

being aware of the risks involved, she will seek ANC services early and create awareness to others on the dangers of home delivery.

Based on the findings given in the preceding chapter, this section provides a conclusion of the findings with a view to crystallize the specific findings in relation to study objectives. This section discusses study recommendations and recommendations areas for further research are then given.

## **6.2 Conclusion**

Based on objective 1 of the study, the conclusion made from the findings was that majority of the OF patients women were below 20 years of age, had primary education, subsistence (peasant), currently married, lived with OF for 2-9 years. Their main source of income was earned from subsistence farming, the majority of cases were reported in rural areas, majority of the participant didn't know their family income, majority of the respondents developed OF between the ages of 15-25 years and were divorced when they sustained OF. Because the findings of the study showed that there is a significant relationship between demographic characteristics and obstetric fistula treatment. Thus, researchers reject the null hypothesis of no significant relationship between demographic characteristics of women and obstetric fistula treatment.

Based on objective 2 of the study, the conclusion made from the findings was that most of the respondents in the study sample were in agreement that Socio-cultural characteristics of obstetric fistula patients influence the context in which fistula occurs in obstetric fistula patients. The mean responses index of 54% indicates that a majority of the respondents agreed that socio-cultural characteristics of obstetric fistula patients' influence the context in which fistula occurs in obstetric fistula

patients. The findings of the study showed the relationship between socio-cultural characteristics and obstetric fistula treatment. Thus, researchers reject the null hypothesis which says there is no significant relationship between socio-cultural characteristics of women and obstetric fistula treatment. Therefore, there is a significant relationship between socio-cultural characteristics and obstetric fistula treatment.

Based on objective 3 of the study, the conclusion made from the findings was that most of the respondents in the study sample were in agreement that obstetric fistula women patients face Psycho-social and economic conditions due to the nature of the illness. Among the social challenges experienced by women with OF were bad smell failure to attend social gatherings such as church loss of marriages and isolation. The findings show that most of the respondents in the study sample were in agreement that women with OF faced adverse economic conditions when seeking treatment in hospital and this affect their health seeking behavior. The study concluded that combination and accumulation of psycho-social and economic factors that affect women with OF healthy seeking behaviour in hospitals. Because of the finding of the study were statistically significant, the null hypothesis which says there is no significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment was rejected. Therefore, there is a significant relationship between psycho-social and economic conditions of women and obstetric fistula treatment.

### **6.3 Recommendations based on specific objectives**

The study was conducted on the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret-Kenya.



Therefore, in view of the findings, discussions and conclusions of this study, the following recommendations were made:

### **Demographic characteristics of women admitted with obstetric fistula at the Gynocare Fistula Centre**

It is no doubt that lack of accessibility to maternity facilities predisposes pregnant women to prefer traditional midwives over the orthodox midwives. If adequate health care facilities and skilled health care workers are available in the rural areas, most cases of VVF would have been prevented. Since most cases of VVF occur among the rural dwellers, it is imperative that Nigerian government, through the Ministry of Health should make accessibility to obstetric care in rural areas a paramount.

### **Socio-cultural characteristics of obstetric fistula patients attending Gynocare Fistula Centre in Eldoret**

It is also equally important that victims of VVF be counselled and rehabilitated. While surgical repair helps victims to get on with a normal life, it is not enough to deal with the effect the scourge has had on their psychological well-being. Social workers and nurses should assist victims in talking about their ordeal. Victims of VVF need people to give them the confidence to relate their experience. With this opportunity, bottled up emotions are let out and victims would be able to gradually gain a good confidence level

Local communities should be enlightened on the problems faced by VVF victims. Afflicted women are only victims of their socio-cultural circumstances; therefore the society should be enlightened to accept them. There should be an assistance for reconciliation and reintegration to ensure that victims are able to return to their communities and families without difficulty, especially when they have been repaired.

There is need to encourage males to be part of women's health, particularly teach the rural men as to the importance of women's health. There is urgent need for inclusion of men in the advocacy and fistula awareness and management. This involvement of men could be done through developing community based re-integration and rehabilitation programs. For the majority of the clients, successful fistula repair and the consequent physical healing is inadequate in the absence of total reclaim of their social life.

There is need to teach the rural community as to the importance of openly discussing any ailments, therefore helping people to seek medical help as early as possible.

There is need for raising awareness of the community through disclosing problems. Also to teach the rural communities about obstetric fistula; why women develop leakage of urine, and the impact of discrimination and isolation on women with this problem.

### **Psycho-social and economic conditions faced by obstetric fistula women attending Gynocare Fistula Centre in Eldoret**

There is need for improvement of the socioeconomic conditions of fistula women by raising the income of the individuals and families through simple community based initiatives. Also, there is need to Organize a small business which will be run by cured fistula patient association in the rural community to help women with obstetric fistula to seek treatment as early as possible.

There are various NGOs in Kenya which help people with peculiar medical and social issues. The Kenyan government should encourage these institutions by funding them to provide training to VVF victims so as to generate income for themselves. Crafts, sewing, basket making and so on are examples of skills these individuals can be

trained on to empower themselves. This type of venture would help reduce their poverty level and they might be able to gain confidence which would reduce the effect of the stigma.

#### **6.4 Recommendations based on surprise findings**

The study recommends the need to conduct fistula repair center in all the Counties in conjunction with other stakeholders so as to repair women with obstetric fistula. Currently, in the country, there are few center/hospital and surgeons where fistula repair are conducted, leaving the majority of women unrepaired who suffer the agony of humiliation and ostracism which may subsequently lead to depression. If a woman with unrepaired obstetric fistula get pregnant, there are high chances of their obstetric fistula to become extensive hence repair can be difficult.

Massive awareness on Obstetric Fistula prevention by all community and government structures with Civil Society Organizations and local governments in the affected areas taking lead is needed at all levels; this has to include highlighting issues and effects of early marriages and early pregnancies as these predispose young girls to fistula. Massive awareness should be an obligation of all community leaders and media.

There is urgent need for inclusion of men in the advocacy and fistula awareness and management. This involvement of men could be done through developing community based re-integration and rehabilitation programs. For the majority of the clients, successful fistula repair and the consequent physical healing is inadequate in the absence of total reclaim of their social life.

### **6.5 Recommendations areas for further research**

Taking into consideration the results and findings of this study, it recommends a further research. The study did not exhaust all matters related to it. Other issues emanated from the study that requires further investigation include:

There is need for further research designed to understand the social economic implication of obstetric fistula among women seeking treatment at Gynocare Fistula Centre in Eldoret.

The need for the in-depth research about diversion procedures conducted on women who have the hard to treat fistula and the long term implication both socially and medically. Also, there is need for further research into Socio-economic re-integration needs for post operative women in regaining their dignity.

There is need for future research on the association between intention to prevent obstetric fistula recurrence, change of health seeking behaviors and knowledge of the risk factors of obstetric fistula recurrence, attitude towards obstetric fistula prevention and self esteem among women with obstetric fistula

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## **APPENDICES**

### **APPENDIX 1: INFORMED CONSENT LETTER**

Dear Sir/Madam

I am a Post graduate student of Moi University carrying out a research study on the “The Social Economic Implication of Obstetric Fistula among Women Seeking Treatment at Gynocare Fistula Centre in Eldoret- Kenya” in partial fulfillment of the requirement for the award of Master of Public Health of Moi University. I kindly request you to answer the questions below. All responses will be handled confidentially and will be used only for this study.

Let me take this opportunity to thank you in advance for taking part in this study.

Yours sincerely,

**NYAKUNDI VICTOR**

**ADM NO: SPH/PGH/09/10**

## **APPENDIX 2: Informed Consent Form**

**Study Title:** The Socioeconomic Implications of Obstetric Fistula among Women Treated at Gynocare Fistula Centre in Eldoret- Kenya.

**Researcher:** Nyakundi Victor.

### **Introduction**

I am a second year student taking a masters degree of Public Health in Moi University school of Public Health Eldoret Town Campus with a concentration in Epidemiology and Disease Control.

### **Purpose:**

The purpose of this study is basically for partial fulfillment of the Requirements for the award of a Degree of Master of Public Health.

**Procedures:** will involve use of structured questionnaires data forms and involvement of chosen key informants.

**Benefits:** The benefits of the study will focus on those who have not been able to receive treatment and those who haven't developed fistula in that those with fistula can be told of availability of treatment and those without taught on prevention by mothers getting maternal health care during pregnancy and childbirth.

**Risks:** there is a risk of not getting many respondents because of the psychological trauma that these patients normally go through.

**Confidentiality:** Any information given about the patient and their status will be held with a lot of confidentiality and in the research no names will be used but numbers to conceal the patients' identity.

**Study Approval:** the study has been approved by the university's institutional research and ethics committee for approval.

Consent and signature:

- a. Respondent's signature. \_\_\_\_\_
- b. Researcher's signature. \_\_\_\_\_
- c. Witness' Signature. \_\_\_\_\_

### APPENDIX 3: QUESTIONNAIRES FOR RESPONDENTS

I am a Post graduate student of Moi University carrying out a research study on the “The Socioeconomic Implications of Obstetric Fistula among Women Treated at Gynocare Fistula Centre in Eldoret- Kenya” in partial fulfillment of the requirement for the award of Master of Public Health of Moi University. I kindly request you to answer the questions below. All responses will be handled confidentially and will be used only for this study. Your contributions are highly appreciated.

Thank you very much in advance.

Questionnaire Number.....Date of interview.....

Date of surgery .....Respondents identity .....

#### SECTION A: SOCIO-DEMOGRAPHIC BACKGROUND

Characteristic	Tick
Number of years of living with OF:	
2-9 years	-----
10-39 years	-----
40 years	-----
Age at interview	
15 – 20yrs	-----
21– 69 yrs	-----
Parity of women with OF	
Para 1 (primipara)	-----
Para 2-6	-----
Level of Education	
No formal education	-----
Primary education	-----
Secondary education	-----
Tertiary	-----
Marital status	
Married	-----
Single	-----
Separated/Divorced	-----
Widow	-----
Occupation of respondents	
No Gainful employment	-----
Self employed (small retail)	-----
Subsistence (peasant)	-----
Distance to health Facility:	
Less than or equal to 1 hour walk	-----
Less than or equal to 2 hours walk	-----
Less than or equal to 3 hours walk	-----
Less than or equal to 4 hours walk	-----
Less than or equal to 5 hours walk	-----
More than 5 hours walk	-----
Main source of income	
Subsistence (peasant)	-----
Self employed (small retail)	-----
No source of income	-----
Income per month	
No income	-----
I don't know	-----
Less than 100ksh/day	-----
More than 100ksh/day	-----
Place of residence	
Rural	-----
Urban	-----

**SECTION A1: HISTORY OF OBSTETRIC FISTULA DATA**

In your opinion, indicate the HISTORY of Obstetric Fistula data

Characteristic		Tick
Age OF developed (years):	15-25 years	-----
	26-39 years	-----
	40 years above	-----
Divorced when OF developed:	Yes	-----
	No	-----
Cause of OF:	Prolonged Obstructed labour	-----
	Operation	-----
	Witchcraft	-----
	Instrumental delivery	-----
	Vaginal tears	-----
	Urinary catheter	-----
	Pushing early	-----
Don't Know	-----	
No of times had OF:	One	-----
	Two	-----
	Three	-----
Number of fistula repair attempts:	One	-----
	Two	-----
	Three	-----
	Four	-----
	Never	-----
Reasons for multiple repairs:	Urine incontinence	-----
	Recurrence following pregnancy	-----

**SECTION A2: OBSTETRIC CHARACTERISTICS**

In your opinion, indicate your Obstetric Characteristics

Characteristics		Tick
Parity:	None	-----
	One-three	-----
	Four-Six	-----
	Seven- nine	-----
	More than nine	-----
Number of antenatal visits during previous pregnancy:	One	-----
	Two	-----
	Three	-----
	Four	-----
	More than four	-----
	None	-----
Delivery place:	Not sure	-----
	Hospital	-----
	Clinic	-----
	Home	-----
	Not applicable	-----



Delivery attendant:	Skilled Birth Attendant Trained Traditional Birth Attendant Relative Friend	----- ----- ----- -----
Labour duration:	Less than 24 hours More than 24 hours 1 week	----- ----- -----
Cause of OF: (hospital records):	Ruptured Uterus Prolonged Obstructed Labour Caesarean section 3 rd degree tear Health facility was far from my home Doctor's scissors hit me during CS Health worker tampered with my bladder	----- ----- ----- ----- ----- ----- -----

#### **SECTION D: PSYCHO-SOCIAL CONDITIONS FACED BY OBSTETRIC FISTULA WOMEN**

1. Please indicate whether you strongly agree (SA), agree (A), are undecided (U), disagree (D), or strongly disagree (SD) with the following statements about the psycho-social conditions faced by obstetric fistula women. 5-point likert scale was used to elicit their responses on the issues raised, ranging from 1=strongly disagree, 2=disagree, 3=Neutral, 4=agree and 5=strongly agree.

Item	Issues	SA	A	N	D	SD
1	Social isolation					
2	Divorce or abandonment /separation					
3	Ridicule and shame due offensive odour					
4	Inability to start a family					
5	Risk of violence Lack of opportunities for work					
6	Prone to illness-urinary tract (stones)					
7	Stigmatization					
8	Rejection, dejection and loss of social support					
9	Loss of baby					

#### **SECTION D1: ECONOMIC CONDITIONS FACED BY OBSTETRIC FISTULA WOMEN**

1. Please indicate whether you strongly agree (SA), agree (A), are undecided (U), disagree (D), or strongly disagree (SD) with the following statements about the economic conditions faced by obstetric fistula women. 5-point likert scale was used to elicit their responses on the issues raised, ranging from 1=strongly disagree, 2=disagree, 3=Neutral, 4=agree and 5=strongly agree.

<b>Item</b>	<b>Issues</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
1	Lack economic empowerment.					
2	Poverty					
3	Limited access to health facilities that might offer high-quality antenatal and delivery care					
4	Long distances to health facilities and a lack of resources					
5	Risk of gainful employment					
6	Accessibility to social / community services					
7	Drop in women participation in income generating activities					
8	Having no income or low income					

#### **APPENDIX 4: Interview Schedule for the Nurses, Doctors, Administrator and two Social work Officers**

The following questions guided the researcher while interviewing the respondents.

#### **II. KEY INFORMANT SCHEDULE: - HEALTH WORKERS**

**Interviews will be one to one with key informants who will include the following**

- Nurses at fistula ward.
  - A Medical/Clinical Officer.
  - A Gynecologist.
  - A hospital Surgeon.
1. What are the commonest types of OF handled in this institution? (*Probe for the commonest types of OF handled in this institution*).
  2. What are the general causes of OF? (*Probe for the general causes of OF handled in this institution*).
  3. In your opinion what do you think characterizes women who exist with fistula? (*Probe for related common socio-demographic characteristics like age at marriage, age at first birth, education, parity, gravidity, occupation etc* )
  4. What do you think causes fistula among women? (*Probe for social, health facility based and any cultural causes*).
  5. From your point of view, do you think there is any relationship with the experiences a woman goes through during pregnancy, labor, delivery and post-delivery and fistula occurrence? Explain the relationship (*Probe for any specifics at each level*)
  6. What do you think are the social –economic impacts that fistula causes to women? (*Probe for any differences in life before and after a woman sustains the condition*).
  7. What are the main challenges faced in handling the survivors?
  8. What extra resources or intervention would be appropriate for the survivors?
  9. What are the constraints facing women willing to seek OF services?
  10. What recommendations do you want to share in this study in support of women with fistula? (*Probe for specific recommendations targeting family members, friends, local leaders, churches, fellow women, community groups etc in support of the socio-economic lives of women with fistula*).

**APPENDIX 5:MAP OF KENYA SHOWING THE LOCATION OF THE STUDY AREA**

Source: Microsoft Encarta (2008).

## APPENDIX 6: IREC APPROVAL LETTER



MOI TEACHING AND REFERRAL HOSPITAL  
P.O. BOX 3  
ELDORET  
Tel: 334711/2/3

Reference: IREC/2013/37  
Approval Number: 0001101



MOI UNIVERSITY  
SCHOOL OF MEDICINE  
P.O. BOX 4806  
ELDORET

1<sup>st</sup> November, 2013

Nyakundi Victor,  
Moi University,  
School of Public Health,  
P.O. Box 4606-30100,  
ELDORET-KENYA.



Dear Victor,

**RE: FORMAL APPROVAL**

The Institutional Research and Ethics Committee have reviewed your research proposal titled:-

**"The Social Economic Implication of Obstetric Fistula among Women Seeking Treatment at Gynocare Fistula Centre in Eldoret-Kenya".**

Your proposal has been granted a Formal Approval Number: **FAN: IREC 1101** on 24<sup>th</sup> October, 2013. You are therefore permitted to begin your investigations.

Note that this approval is for 1 year; it will thus expire on 31<sup>st</sup> October, 2014. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to the expiry date.

You are required to submit progress report(s) regularly as dictated by your proposal. Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. The Committee expects to receive a final report at the end of the study.

Sincerely,

**PROF. E. WERE**  
**CHAIRMAN**  
**INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE**

cc	Director - MTRH	Dean - SOM	Dean - SON
	Principal - CHS	Dean - SPH	Dean - SOD