FACTORS ASSOCIATED WITH UTILIZATION OF HOSPITAL DELIVERIES AT GARISSA PROVINCIAL GENERAL HOSPITAL

SIYAT MOGE GURE

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DECLARATION

This is to declare that this study titled '*Factors associated with utilization of hospital deliveries at Garissa Provincial General Hospital'* is my original work and has not been submitted to any other institution for the award of any degree.

Siyat M. Gure

Signed…….

Date…….

APPROVAL

This dissertation has been submitted for examination with our approval as Supervisors.

1. MR PETER KITHUKA, Msc

SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF NAIROBI

SIGNATURE …… DATE……

2. PROF.JOSEPH WANG'OMBE BA, MA, PhD.

SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF NAIROBI

SIGNATURE…… DATE……

DIRECTOR, SCHOOL OF PUBLIC HEALTH**,** UNIVERSITY OF NAIROBI

DR. DISMAS ONGORE, MBCHB, MPH, PhD

SIGNATURE…… DATE……

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LIST OF ABBREVIATIONS/ACROYMNS

1. MMR Maternal Mortality Ratio
2. MOH Ministry Of Health
3. AIDS Acquired Immuno - Deficiency Syndrome
4. ANC Antenatal Clinic
5. BEmOC Basic Emergency Obstetric Care
6. CORPs Community Own Resource Persons
7. DANIDA Danish International Development Agent
8. DFID International Development
9. DHMT District Health Management Team
10. DMOH District Medical Officer of Health
11. EmOC Emergency Obstetric Care
12. FANC Focused Antenatal Care
13. FGD Focus Group Discussion
14. FP Family Planning
15. HIV Human Immunodeficiency Virus
16. KDHS Kenya Demographic Health Survey
17. KM Kilometer
18. MCH Mother – Child Health Clinic
19. MDG Millennium Development Goals
20. MIP Malaria In Pregnancy
21. MOP Ministry Of Planning
22. NEP North Eastern Province

1. OBA Output Based Approach
2. PGH Provincial General Hospital
3. PMTCT Prevention Of Mother- To- Child Transmission
4. PHMT Provincial Health Management Team
5. SPSS Statistical Package For Social Science
6. TBA Traditional Birth Attendant
7. UNFP United Nation Population Fund
8. UN United Nation
9. UNICEF United Nation Children Fund
10. WHO World Health Organization

DEFINITION OF OPERATIONAL TERMS

Skilled deliveries – Deliveries conducted by health workers who are trained on midwifery skills. These are nurses, clinical officers, doctors, midwives (WHO, 2005)

Skilled attendant – provision of medical services by health workers who are trained on midwifery to women during pregnancy, deliveries and after deliveries (postnatal)), (WHO, 2005)

Hospital deliveries – Deliveries that are conducted within hospital set-up(WHO, 2005).

Home deliveries – Deliveries that are conducted outside the hospital. (Ajibola, 2003)

Maternal death is the 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 (WHO, 2004) .

Utilization – act of using the available service that is provided by the health facility (Lawson et al, 2003)

Health Workers – These are all staff who works at the provincial general hospital who contributes provision of deliveries services regardless of their cadre and qualifications.

Women – These are the clients who are using the maternal and child health services at PGH Garissa and targeted by this study.

Staff Gender – This is interchangeably used with staff sex

ABSTRACT

Low skilled delivery is associated with high MMR (Lawson et al, 2003). NEP has the highest maternal mortality and lowest skilled deliveries in Kenya (KDHS, 2008). ANC attendance is high both nationally and in NEP. This research determines factors associated with utilization of hospital deliveries at Garissa PGH. A cross-sectional descriptive study using mixed methods was conducted. Survey questionnaires/FGD guide were administered to women attending MCH as well as those admitted in the maternity ward. A total of 431participants were randomly selected and interviewed. 3 FGDs conducted on separate days. Data analysis was conducted using SPSS version 17.0. Descriptive statistics were used to summarize categorical/continuous variables and Pearson's Chi-square test and Binary logistic regression done to test the strength of association and to identify confounders, respectively.

The finding of the study reveal that among the factors studied, age, none existence of cultural/religious beliefs, previous history in delivering at PGH and distance were associated with utilization of hospital delivery at PGH Garissa. No association was found between using antenatal clinic at PGH Garissa and delivering at the same hospital. Staff attitude were appreciated positively, though client raised major complaints.. Majority of women were making their own decision on where they will deliver. Cultural or religious beliefs were not identified as barriers to women's utilization of the maternity services.

In conclusion, age, none existence of cultural/religious beliefs, previous history in delivering at PGH Garissa and distance were the only factors associated with utilization of hospital delivery at PGH Garissa. The role of health education at ANC to transit pregnant women to deliver in the hospital is not clear. It recommends the hospital administration to ensures health staff are responsive to the needs of the clients while leveraging on the popularity of the hospital. The quality of health education at the ANC should be re-assessed and improvements instituted. Further research is also recommended to study perception of clients not using PGH Garissa maternal and child health services.

Key words: Hospital, deliveries, skills, attendants, women, health workers, utilization, maternal mortality

CHAPTER 1; INTRODUCTION AND BACKGROUND

1.1 Introduction

Skilled delivery is defined by World Health Organization (WHO) as deliveries conducted by health professionals who are trained on Basic Emergency Obstetric Care (BEmOC) (WHO, 2005). These professionals are mainly medical doctors, nurses, clinical officers and midwives who have the basic midwifery skills. The fundamental basis is the qualification of the service providers who at minimum maintain hygienic condition and recognize complication regardless where the delivery occurs. This, therefore rules out Traditional Birth Attendants (TBAs) who are still being used widely by many developing countries as skilled attendants. Studies have actually shown that, TBAs have no impact in reducing maternal deaths; though they are believed to have contributed reduction of neonatal tetanus through umbilical care (Lawson et al, 2003, WHO, 2005). However many experts believe their role as Community's Own Resource Persons (CORPs) is crucial especially in participating referrals and mobilizing the pregnant women and linked them to health facilities (Lawson et al, 2003, WHO 2005).

Utilization of the skilled delivery services reduces significantly the effects related to complications that may arise during child birth. Many of these obstetric complications are preventable if diagnosed early and a proper management constituted promptly. In practical terms, this is only possible if the health provider has the proper skills backed by the right medical supplies and equipments. This study therefore investigated the reasons why the high utilization of antenatal services at Garissa Provincial General Hospital (PGH) is not proportionally translated into high hospital delivery in the same hospital. It specifically assessed the women's perception by looking at factors that relates health workers (attitude and gender preferences), health facility (distance, cost and quality of services) as well as those emanate from the women themselves (Religion, culture and TBA).

The findings of the study are presented in various chapters as shown in the report. After the background information, the literature review and the statement of the research problem, the methodologies used are discussed. The results of the study in terms of quantitative and qualitative methods are outlined and thereafter a general discussion to synergize the outcome of

the two methods is put forward. The study's conclusions and recommendations are finally presented while supporting materials like questionnaires are attached as annex.

1.2. Background

Lack of skilled deliveries is a public health concern as it is associated with unacceptably high maternal and prenatal mortality in the developing countries (Lawson et al, 2003). Globally, more than 500, 000 women die every year of pregnancy related complications (Lawson et al, 2003, United Nation Population Fund, 2002,). Ninety nine percent of these deaths occur in the developing countries and half of it in Africa where resources are scarce and illiteracy is high (Ajibola, 2003, Lawson et al, 2003). Abortion, Eclampsia, hemorrhages, obstructed labour and puerperal sepsis are the most direct cause of these death while diseases like HIV, malaria, anemia and tuberculosis are leading causes of indirect death (Lawson, 2003).

Kenya Demographic Health Survey (KDHS) 2008 estimates the maternal mortality in Kenya to be 488/100,000 which is a slight increment from 2003 KDHS of 414/100,000. Though KDHS did not disaggregate the data in terms of provinces, NEP is believed to have highest maternal mortality in the country. This is because this area is inhibited by nomads who migrate from one place to another in search of pasture for their livestock and the health delivery system is said to have failed to put in place appropriate plan that accommodates their health needs (Maalim, 2006).

While this is within the range of maternal mortality in developing countries, which ranges between 170/100,000 in Latin America and Caribbean to 870 /100,000 in some part of Africa (Ministry Of Planning(MOP), 2000), it is prohibitive in the developed world where the rate is less than 20/100,000 (Abouzahr, 2003). In another words a Kenyan woman has a life time risk of 1:36 chances of dying from maternal causes compared to countries in developed world like Sweden which has 1:6000 chances (MOP, 2000). It is more worrying to state that maternal death in Kenya represents 27% of all the death of women aged 15 – 45 years (MOP, 2000).

For this reason, the United Nations' Millennium Development Goal five targets reduction of maternal mortality by three quarter through improved maternal health specifically skilled attendance by the year 2015 (WHO, 2005). All member state of the United Nations are also

expected to reduce their maternal death in similar margin from 1990 baseline (WHO, 2005). It is in this context that the Kenya's Ministry of Health (MOH), through Division of Reproductive Health developed the National Reproductive Health Strategy (1997 – 2010) aims at the reduction of maternal mortality to 170/100,000 from 590/100,000 live birth and also increase the number of pregnant mothers attended to by skilled attendant to 90% (MOH, 2003). While the objective of the strategy could not be wholly achieved because of challenges related to underfunding and impact of HIV/AIDS endemic, it is still valid and being implemented accordingly (MOH, 2007). Fortunately, if implemented, there are actions such as skilled attendance during prenatal, intra partum and postnatal care (Green, 2006, Kamara, et al, 1997) that are proven to be effective in reducing maternal mortality which also increases chances of survival during pregnancies and childbirth (Gonzalez, Portino and Ruiz, 2006).

Currently, Kenya's skilled delivery stands at 44% with hospital delivery of 43% and in North Eastern province, it is estimated at 31.6% and 17% respectively (KDHS, 2008). This is a significant improvement from 8% of NEP's hospital delivery in KDHS of 2003. Conversely; pregnant mothers who at least visited antenatal clinic once, are over 92% nationally and at 69.5% in North Eastern province (KDHS, 2008).

For the last 7 years, Ministry of Health in collaboration with other partners has put in place several mechanisms to improve maternal health in North Eastern province, and these are indeed attributed to improved utilization of maternal services (UNICEF, 2008). New maternity rooms have been constructed and existing ones renovated, the delivery kits and drug supply have been significantly streamlined. Though staff shortage is still an issue, many partners tried to employ staff, mostly nurses, specifically for the periphery health facilities in order to improve services. Additionally, many trainings were conducted on areas related to maternal health notably; Emergency Obstetric Care (EmOC), Focused Antenatal Care (FANC), Malaria In Pregnancy (MIP), Prevention of Maternal To Child Transmission (PMTCT) among other trainings (MOH, 2008).

Similarly, other innovative ways to reach the nomads have been initiated including Mobile Nomadic clinics by DANIDA (Bousery et al, 2009), the outreach program by the Ministry of Health with the support of other partners as well as the community strategy which is currently

being implemented. Furthermore, Output Based Approach (OBA), a concept aimed to remove the cost burden of delivery and referral from mothers where the facilities costs are reimbursed through a voucher system, is being implemented throughout NEP (UNICEF, 2008). PGH Garissa also has a maternal shelter where pregnant women with anticipated complications whose delivery date is not yet due and have no relatives nearby are hosted and monitored until delivery.

Garissa Provincial General Hospital (PGH) is the only level five referral centre for the Counties in North Eastern region as well as some neighboring Counties in Eastern and Coast regions and has since received much attention from various developmental partners in an effort to expand its capacity. The maternity ward was renovated and expanded 5 years ago while a new maternity theatre was constructed and equipped through a DANIDA project. Staffing levels, particularly specialist in various disciplines have being improved. For example, six years ago, the hospital had only two general doctors, one of them being a superintendent. Currently, it has 9 specialist doctors and 18 general practitioners. These have uplifted the hospital to a teaching centre for many cadres from various medical tertiary institutions.

CHAPTER 2; LITERATURE REVIEW

Somalis who are predominately Muslims are said to attribute all illness and disease to divine act (Bousery et al, 2009). Contemporary means of treatment through praying and reading of Quran is the first response to the sickness before taking the patient to health facilities especially in the rural areas (Maalim 2006). Though general health service provisions in NEP are said to have been hindered by several other factors namely; long distance, inadequate qualified personnel, as well as issues related to gender and culture (Ganga-Limando et al 2006), the study particularly investigated those factors that may have direct effect on the perception of the pregnant women in utilizing hospital deliveries at PGH Garissa. These study factors can be categorized in relation to Health workers (attitude and gender), health facility (distance, cost and quality of the services) as well as Women's factors (Cultural, TBA and religious beliefs).

2.1. Health Workers Factors

2.1.1. Attitude of health workers

The relationship between patients and service provider is said to have an impact on future utilization of maternal services (Lawson et al, 2003). Patient satisfaction on quality of the services is changed by issues like privacy, confidentiality as well as sensitivity of the staff. It is said to be reflected on the willingness to return for the same services in the forthcoming pregnancy. In Tanzania, a study associated poor communication by the health providers during antenatal attendance to prevailing low hospital delivery (Magoma et al, 2010). Similarly, others associated maternal delays in using maternal services with previous negative experiences with the health staff interaction (Sarker at el, 2010, Lawson et al, 2003). Likewise, discourtesy by health workers and disrespect for local cultural values causes resentment among clients.

Shortage of health professionals in terms of quantity and quality were associated with underutilization of health services in NEP (Ganga-Limando et al 2006). Irregular opening hours, long waiting hours and language barrier to relay health information are factors that were identified by previous studies to be affecting the community of NEP when seeking health services (Ganga-Limando et al 2006). A study also mentioned feeling of mistrust, lack of respect

and cultural insensibility among the health workers as some of the problems the clients face in reference to staff interaction during service delivery (Ganga-Limando et al 2006).

2.1.2. Gender of the health workers

Though there seems to be little information that relates health service utilization and staff gender in the global arena, the issue is very important in North Eastern Province where there are strong religious influences on preferences of health provider especially on maternal services. While one study has not shown any relationship between gender and service utilization in North Eastern Province (Ganga-Limando et al 2006), another mentioned lack of female staff in health facilities as a contributing factor in dissatisfaction raised by the community in rural areas especially on maternity service (Bousery et al, 2009).

These issues are important because the interaction between the service provider and the clientele is imperative for the success of any intervention. NEP is inhabited by a community who are culturally conservative more so among the women population. This is compounded by the fact that most of the facilities are manned by male staff of whom many of them are from outside the community. These therefore may increase, in a way cultural inaccessibility and exacerbate barriers related to staff factors.

2.2. Health Facility Factors

2.2.1. Distance for the facility

Unavailability of maternal services especially in rural communities are said to adversely contribute to delay in accessing emergency services. Lack of proper transport system, poor road infrastructure and lack of communication network in most of developing countries negatively impact on maternal health (Lawson et al, 2003**).**

While distance between health facilities in most parts of Kenya are within or even less than 5 km apart, NEP is said to be a real challenge due to the very sporadic distribution of health facilities and hence the community has to trek long distances to access health care (Mureithi and Mwanthi, 2005) . Mean distance to reach a static health facility in North Eastern Province is estimated to be over 10 km though most of the rural population travels longer distances to access

health facility (Bousery et al, 2009). These coupled with poor road infrastructure; poor communication network, lack of referral system and inadequate community mobilization, worsen the situation. The nomads are the most affected as they roam around looking for pasture and water for their animals and there are no proper mechanisms to meet their health care needs (Bousery et al, 2009). A study conducted in Garissa also revealed strong positive association between the distance from the health facility and utilization of antenatal services (Sheikh, 2010)

2.2.2. Cost of hospital delivery

Many studies associate high cost of medical care to reduced utilization of health services especially maternal health in Africa (Sarker et al, 2010, Mubyazi et al, 2010 and Magoma et al, 2010). This is exacerbated by the fact that there is high poverty rate in the developing world. Introduction of cost-sharing in Kenya in the late 1980s reduced significantly the use of many important services (Collins, et al 1996). User fees for services were seen to act as a powerful deterrent to maternal care, especially among the poor and greatly contributes to the low coverage (Lawson et al, 2003, Witter Et al, 2003).

In North Eastern Province, the issue of cost is very important because of high poverty index among the community (Boursery et al, 2009). Cost of services is already said to be affecting the provision of health care especially in rural area in NEP (Ganga-Limando et al 2006). Apparently, an intervention like Output based Approach (OBA) which is supported by UNICEF was expected to waive maternity charges from the clients in NEP including PGH. However, assuming that this is being utilized appropriately, there could be still other costs that are incurred by the clients - directly or indirectly- that also associate the utilization of maternity services.

2.2.3. Quality of the services

Quality of care can be perceived from different stand point– provider, clients or even administrators/managers perspective. In the client point of view, quality of service can be seen in respect to time taken to offer the services, privacy, cleanliness as well as availability of medical supplies and equipments (Sheikh, 2010, Sarker et al, 2010). As stated, patients will not use services unless they see their own needs are catered for and convinced that an effective remedy is available within the health facility (Witter et al, 2003). Quality service in relation to the client

perception is to make services cost-effective by meeting women health needs in appropriate ways and this reflects in the future use of the services (Lawson et al, 2003).

Quality of the service provided is also said to improve staff ethics as properly trained staff with the right resources needed is more likely to facilitate positive attitude towards the clients (Lawson et al, 2003). Similarly, good quality of the service is associated with timely use of the maternal services by the community (Sarker et al, 2010).

Quality of the service provided will have a profound effect on acceptability and uptake of the service. Dissatisfaction of the health services offered in northeastern are stated in some studies as contributory factor in low service utilization (Boursery et al, 2009 and Ganga-Limando et al 2006).

2.3. Women Factor

2.3.1 Cultural practices of the women

Globally, women are disadvantaged compared to men in not only health issues but many other developmental aspects. Cultural practices are as varied as there are ethnic groups in Africa. Though some cultural practices promote both prenatal and maternal health, many of the practices are exceedingly detrimental and discriminatory against the health of the women (Lawson et al, 2003). Formal education which is one of the proven interventions that contributes to better outcome of maternal health is very low for many African women. Related to this is economic empowerment and ownership of properties which marginalize many women that is also linked with cultural practices (Lawson et al, 2003).

Women in north Eastern Province equally encounter considerable problems that stem from cultural practices which make them more vulnerable than men (Sheikh, 2010). They have less access to general health care including reproductive health, education -both formal and informal as well proper health information (Ganga-Limando et al 2006). Essentially, these means few skills, little decision making, translating to less power and no control over income (Bousery et al, 2009). Some studies claim the Somali women are subordinate to men in virtually all aspect of their life to the extent that the health of the pregnant mother and unborn baby largely depend on the husband (Bousery et al, 2009). All these affect their ability to make prompt decision to access

health care including during emergency. It has been shown in a previous study that the more the women are educated the higher chances of using antenatal care (Sheikh, 2010).

2.3.2. Influence of Traditional birth attendants

Many African countries previously encouraged the Traditional Birth Attendant (TBA) to conduct deliveries after undergoing training (WHO, 2005). However, though some success has been reported on reduction of neonatal tetanus through cord care, they have no major impact on reduction of maternal death and therefore cannot replace the midwives (Lawson et al, 2003). TBA is embedded in many African culture and cannot be easily wished away especially in the rural set-ups where the practices are popular (Mubyazi et al, 2010).

According to some studies in North Eastern Province, most mothers trust the traditional birth attendant over health facilities during deliveries (Boursery et al, 2009, Ganga-Limando et al 2006). However, there are strong indications that most mothers understood and embraced the importance of antenatal and immunization services (Sheikh, 2010). Some argue that the design of existing lower facilities were not catering for the need of the mothers as maternal services were unavailable because of many factors including the basic in design of health facilities and lack of the necessary equipments (Ganga-Limando et al 2006). Currently, this seems changing as the ministry of health encourages all government health facilities to provide maternity services.

2.3.3. Religious belief

Religion plays an important role on the behavior of the individual. Some writers blamed religious belief and practices for restricting the role of women in social activities that pessimistically impacts on their health (Lawson et al, 2003). Most of the factors discussed above like little education, decision making and economic empowerment which contribute to the low status of women have also religious link and connotation.

In NEP this is very important as religion plays a pivotal role not only in the health of the individual but many aspects of the individuals life. This is considerably more pronounced among the women in the Somali community who live more subjective life (Bousery et al, 2009). Religion dictates the life of the individuals by restricting the interaction between men who make

the bulk of health providers including the maternity services and the client, in this case the women who are seeking the maternity services.

In summary, while globally there is some literature on this subject, there is little information regarding this set up and the community targeted in this study. What has been documented in NEP so far is mainly on rural settings within a pastoralist life style that target general health care provision which apparently is different from this study that targets urban population on specific health service (Hospital delivery). The circumstances and challenges under the previous studies and their target populations are quite different from this study's targeted population. Even then, many of the factors under study are not extensively covered in the previous studies in NEP. For example, issues like the role of culture, religion and gender preferences of the community in the context of maternal services seems unclear.

CHAPTER 3; STATEMENT OF THE RESEARCH PROBLEM

3.1 Problem Statement

Skilled delivery is one of the proven strategies within the safe motherhood concept in reducing maternal death and therefore seeking client perspective is vital as their views will go a long way in providing appropriate maternal services (Lawson et al, 2003). This is more so in communities like Somalis who are conservative in their culture and who may not otherwise get other forums to air their concerns. The involvement of the communities in planning of any health service delivery is imperative (Witter et al, 2003). This will increase their participation and create the ownership to foster a proper utilization of the planned services. Given the lack of immediate need demonstrated for preventive care by the communities, maternal services as preventive measure is particularly important in involving the community (Witter et al, 2003).

Garissa Provincial general hospital underwent many changes in terms of physical infrastructure, equipments/supplies and human resource. For instance, the maternity ward was renovated in 2007 while a new maternity theatre constructed and equipped a year later through a DANIDA project. Currently there is a gynecologist, a general practitioner and 2 intern doctors assigned to the maternity unit. An innovative system like OBA to cushion women from delivery cost, has also being initiated. Despite all these mechanism, the utilization of delivery services is still low (41%) while ANC attendance stands at 70%. These therefore showed a clear gap between ANC utilization and hospital delivery within the hospital. The expectation would have been this good ANC attendance was translated to high utilization of maternity services.

This study therefore investigated the reason for the existing gap between high utilization of ANC services and low delivery at PGH Garissa. To that end, the study collected the views of women in relation to factors that may affect hospital delivery, particularly those related to their own culture, religion/belief and the role of TBA. It also looked into perceived factors related to facilities like quality of services provided; distance and fees charged as well as those that are linked to health staff like their gender and attitude.

Though previous studies have associated factors like the individual characteristics, quality of care, consumer-provider interaction as well as socio-economic environment of the community in NEP with utilization of health services like immunization and antenatal care (Ganga-Limando et al 2006), there is no proper information that is available on the role of these factors in influencing utilization of hospital deliveries in relation to PGH Garissa which is unique in its set up.

3.2. Conceptual Framework

Figure 1 details an analysis of the factors that may be associated with utilization of delivery services at PGH Garissa (outcome variable). These factors included

1. Contextual determinants

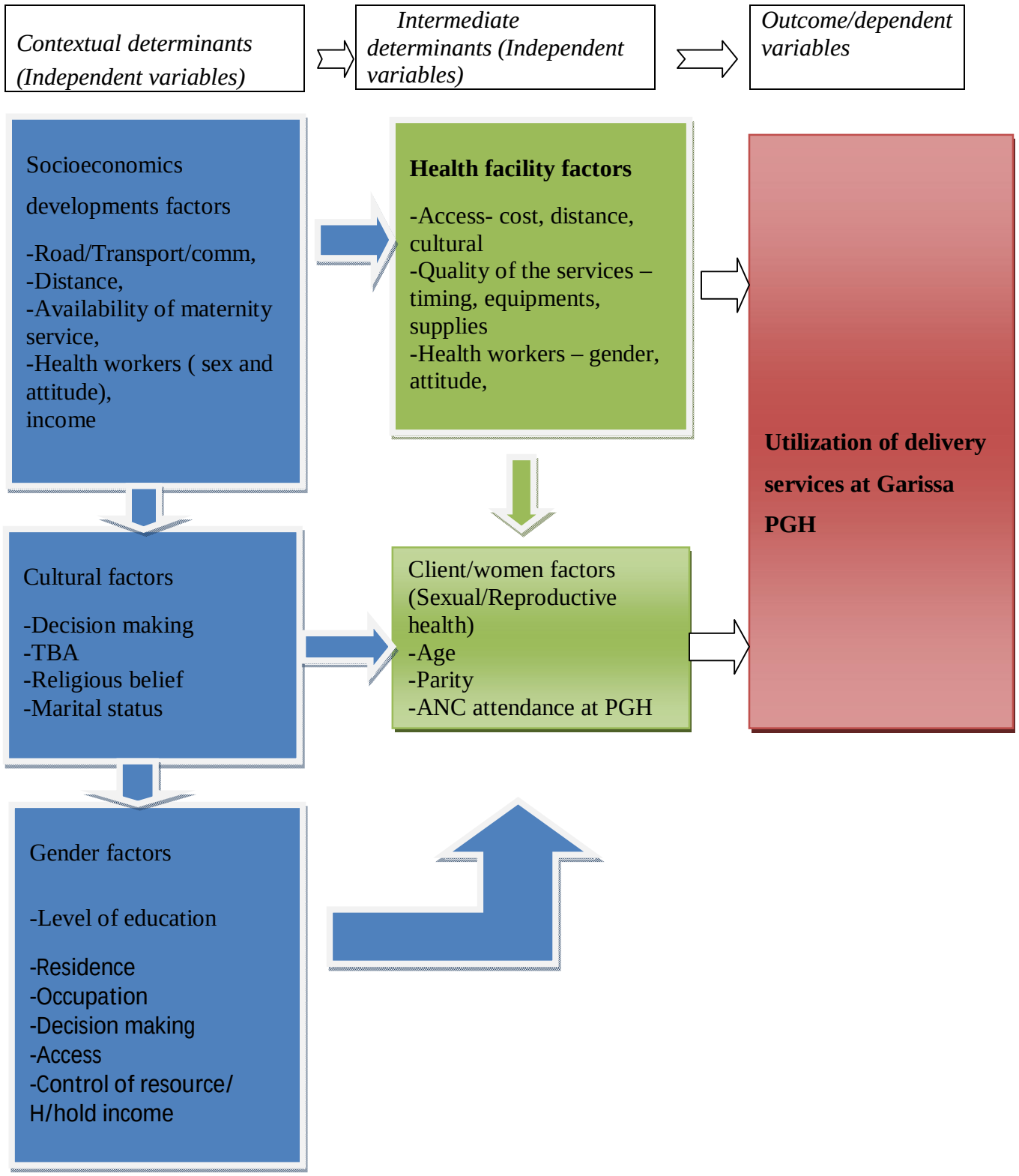
- Socioeconomics developments factors (Road/Transport/comm, Distance, Availability of maternity service, Health workers (sex and attitude), income)
- Cultural factors (Decision making, TBA, Religious belief, Marital status)
- Gender factors (Level of education, Residence, Occupation, Decision making, Access, Control of resource/ H/hold income

2. Intermediate determinants

- Health facility factors, (Access- cost, distance, cultural), Quality of the services (timing, equipments, supplies),
- Health workers (gender, attitude)
- Client/women factors (Sexual/Reproductive health) - Age , Parity, ANC attendance at PG

However, this study only concentrated three factors; clients/women factors (TBA, Religious/cultural beliefs), Health facility related factors (Distance, cost and quality of services) and those associated with Health workers (Attitude and their gender)

Figure 1: Factors associated with utilization of Hospital deliveries at PGH Garissa



3.3. Justification

Skilled delivery is one of the strategies that are advocated to reduce the unacceptably high maternal mortality in the Developing countries like Kenya (UNFPA, 2002). Unskilled attendance during delivery has been positively correlated with high maternal death globally and Sub-Sahara Africa is said to be affected most (Lawson, 2003). The latest national survey showed that NEP has the lowest hospital delivery but good utilization of ANC services (KDHS, 2008). A comparison between ANC and hospital delivery within PGH Garissa reveals a big disparity. Similarly, the province has the highest maternal mortality, a perfect correlation with the low skilled delivery.

Currently, women who visited antenatal clinic at least once during their pregnancy stand more than 92% nationally, and nearly 70% in Northeastern province (KDHS, 2008). Comparatively, the proportion delivered at health facility is 43% in the country and 17% in NEP (KDHS, 2008). In 2008, Garissa Provincial General hospital's ANC clinic attended to more than 6,250 pregnant women and conducted about 2600 deliveries, which translates to only 41% of those attending ANC utilizing maternity services (District Medical Officer of Health, DMOH, 2009). This is notwithstanding its advantage as referral centre, which attracts many clients from different areas because of specialized services like operations, diagnostics and maternal shelters that accommodate pregnant women with complications whose date of delivery is not yet.

As a result, the finding of the study was expected to give an insight to the health planners and implementers in various levels of the health ministry hierarchy. This is important because it helps to incorporate the feelings of the clients in their planning process and put the right measure to attract more mothers to utilize delivery services. As a long term, the outcome of this research was also anticipated to inform a policy change at the Ministry of Health as regards to maternal care principally at the ANC level so that linkage with maternity services is improved and in essence reduce the high maternal death. The other partners who are involved on the improvement of maternal health particularly in increasing uptake of hospital deliveries in North Eastern Province will also see the relevance of these results and adjust their interventions accordingly

3.4. Objectives

3.4.1 Broad objective

To determine the factors associated with utilization of hospital deliveries at PGH Garissa.

3.4.2 Specific objectives

1. To determine the association between socio- demographic characteristics and utilization of hospital deliveries at PGH Garissa

2. To identify the relationship between women/client related factors and utilization of hospital deliveries at PGH Garissa

3. To determine the association between health facility factors and utilization of hospital deliveries at PGH

4. To identify the association between health workers factors and utilization of hospital deliveries at PGH.

3.4.3. Research questions

1. To what extent are social demographic characteristics associated with hospital deliveries at PGH Garissa?

2. To what extent are women/client factors associated with utilization of hospital deliveries at PGH Garissa?

3. To what extent are health workers' factors associated with utilization of hospital deliveries at PGH Garissa?

4. To what extent are health facility factors associated with utilization of hospital deliveries at PGH Garissa?

CHAPTER 4; STUDY DESIGN AND METHODOLOGY

4.1 Study Design

The research was descriptive cross-sectional study design with quantitative – qualitative method for data collection. This method and design were chosen due to its relevance in gathering the required data and the reliability in generating results. It is also well suited to the goal of describing variables and their distribution pattern.

4.2 Variables

The outcome variable of interest in the study was utilization of hospital delivery services at the PGH Garissa. The predictive variables were categorized into social demographic factors, women/clients factors - cultural, TBA, religious, those associated with health workers – gender, attitude and those attributed to the health facility like distance, cost and quality of services.

4.3 Study site

The study was conducted in PGH Garissa which is situated in Garissa District, North Eastern region (Currently divided into 3 Counties – Garissa, Wajir and Mandera)**.** Garissa town was the provincial headquarter for NEP, nearly 400 KM north east of the capital Nairobi. It has a population projection of 141,889 (2009 census), but believed to be having much higher population because of people attracted by the surrounding refugee camps. There are 3 administrative divisions and one parliamentary constituency. Garissa town is currently county headquarter for Garisa county which has seven sub-counties (Formerly districts).

The district is inhabited predominately by Somalis who profess the Islamic faith though other communities also live- mainly Garissa municipality. Like any part of NEP, the district economic activities consist of nomadic pastoralism (32%) and semi-pastoralism (57.1%) with rearing of camel, goat, sheep and cattle as the main source of livelihood (Bousery et al, 2009). An estimated 60-70% of the population living in NEP live pastoral life (Muriithi and Mwanthi, 2005). Subsistence farming is practiced along River Tana. Commercial activities are mainly concentrated in the trading centers. The Kenya economic survey (2007) estimates more than 70% of Garissa residences are living below the poverty line.

The district has poor road infrastructure especially in the rural area where it becomes inaccessible during rainy seasons (Bousery et al, 2009). Telecommunication outside Garissa town is a real challenge while clean water and proper sanitation services are not adequate, exposing the residents to water borne diseases (Bousery et al, 2009).

The few and under staffed health facilities are mainly situated in trading centers making the nomads trek long distance to access health care (Bousery et al, 2009). Recently a nomadic mobile clinic concept has been introduced to take care of the health care need of the nomads who wonder around in pursue of pasture for their livestock (Bousery et al, 2009). Like any part of NEP, the health indicators of Garissa district are very poor except HIV/AIDS which is said to be below 1% (Bousery et al, 2009). However, because of persistent drought, many nomadic drop-outs are camped in informal settlements within Garissa town and with high movement of people to and fro other parts of the country, there all indications that the HIV rate is on the rise (Ganga-limando et al 2006).

PGH Garissa is the only level 5 Hospital in NEP. It is a referral centre for the 3 counties of North Eastern region plus some neighboring districts in eastern and coast regions. It also acts as teaching hospital for various medical cadres like nurses, medical doctors and clinical officers. In recent years the hospital expanded tremendously thanks to supports from many partners especially DANIDA which constructed many new structures and renovated many more. The government also boosted the staffing level particularly specialists in the medical field. The maternity ward benefited immensely from DANIDA project as it got a facelift. Other partners like UNICEF also assisted in many ways including output based approach fund which is meant to make delivery service free. Though still there is shortage of staff in the hospital, the maternity is far much better than what it was 5 years ago. Currently there is a gynecologist, a general practitioner and 2 intern doctors assigned to the maternity unit

4.4 Study population

The targeted populations in this study were women who are accessing maternal and child health services at PGH Garissa. Specifically, it targeted all pregnant women attending antenatal clinic in the hospital's MCH, newly delivered women who are in maternity unit during the study period and non-pregnant women who come for others services like immunization, post-natal and FP but

who previously delivered at PGH Garissa. The women/clients who had used PGH maternity unit previously, gave information on their perception in relation to their previous experience at the hospital while Pregnant women attending MCH who never used PGH maternity unit – either primi-gravida or otherwise were included to provide information on what they think about the hospital delivery services.

4.5. Sampling

4.5.1 Sampling Frame

- All pregnant women attending antenatal clinic at PGH Garissa
- Non pregnant women attending MCH clinic for other service like FP, Immunization, postnatal but previously delivered at PGH maternity unit
- Women who newly delivered at PGH and are still in maternity unit during the study period

4.5.2 Sampling procedure

All targeted clients seeking maternal and child health services at PGH Garissa were selected using simple random sampling where every other client was picked for the study as they attended the clinic/maternity for the services. The pregnant women constituted nearly 70% of the sample size (representing the ANC coverage at PGH in 2009). Other women who come for other services like immunization, PNC and FP who previously used maternity service in PGH Garissa and those who are currently in the maternity were allocated the remaining 30% of the sample-equally sharing 15% each. The interviews continued till required number was reached.

4.5.3 Sample Size Determination:

This was a single population proportion and therefore the following formula applies

$n = z^2 \{p(1-p)\}/d^2$

Where

n= sample size

z = normal deviate taken at 95% confidence level

p= estimated proportion of women who delivered a PGH Garissa, 2009

d= margin error taken as 0.05

This will be

n= {1.96*1.96*0.41(1-0.41)}/(0.05*0.05)

n= 372.

This was oversampled by 10% to cover for unexpected drop-outs making a total 410 (287 of the sample was from the Pregnant women, 123 were shared equally between those in the maternity unit and non pregnant).

4.5.4 Inclusion criteria

The inclusion criteria was all pregnant women attending ANC clinic plus those who had had previously delivered at the hospital and currently using the clinic for other services. They were identified through screening as they enter the ANC waiting area. Those who are at maternity ward during the study period were automatically included.

4.5.5 Exclusion criteria

Mothers who were not pregnant and have no experience in maternity service of PGH Garissa were not included in the study.

4.6 Data collection, management and analysis

The data collection, management and analysis was to ascertain data quality, information accuracy and result reliability. This was discussed separately below.

4.6.1 Data collection

Before the commencement of the research, the developed questionnaires were pre-tested in another facility away from the study site (Iftin District hospital). This was to ensure the questions were clear to the participants and therefore gave valid and reliable information. As the study was a mixed method of quantitative and qualitative methods so as to complement each other, open

and close ended semi-structured questionnaires and FGD guide were administered to the individual/ group of women attending maternal child health services including those in maternity unit.

The data was collected between 21st November 2011 and 5th January 2012 with help of 3 research assistants and a supervisor who were trained. In each of the 3 categories (pregnant, non-pregnant and newly delivered), some women were chosen for Focus Group Discussions (FGDs) on selected days so as not to participate the study twice. A total of 3 FGDs consisting 10 to 12 women were carried out using FGD guide and the discussions were audio taped. Research assistants who were trained prior to the exercise administered the questionnaires with the help of a supervisor who closely monitored their work. The principle investigator crosschecked the filled questionnaires regularly to ascertain correctness and completeness.

4.6.2 Data management

The quantitative data from the field was coded and double entered into a designed computer database using MS-Access application. Files Back-up was regularly done to avoid any loss or tampering. Data cleaning and validation was performed in order to achieve a clean dataset that was exported into a Statistical Package format (SPSS) for analysis.

Semi structured questionnaires were used to collect the qualitative data from the Focus Group Discussions (FGDs) participants. As the sessions progressed, the discussions were audio taped and later transcribed and grouped in terms of themes.

4.6.3 Data analysis

The two sets of data; qualitative and quantitative were analyzed separately. The processes used is explained below:

4.6.3.1 Qualitative Analysis

Using the semi structured questionnaire guide as basis, the qualitative data that was audio-taped, transcribed and categorized into themes. It was cleaned, further developed and integrated as part of the narrative. Remarkable statements and life experiences of the participants were translated into English and included in the narrative as direct quotes.

4.6.3.2 Quantitative Analysis

The quantitative data was analyzed using SPSS version 17.0 statistical software. Exploratory data techniques were used at the initial stage of analysis to uncover the structure of data and identify outliers or unusual entered values. Univariate analysis was conducted where descriptive statistics such as proportions and percentages were used to summarize categorical variables while measures of central tendency such as mean, Standard Deviation, median and ranges were used for continuous variables.

Further bivariate Analysis was done using Pearson's Chi-square tests to check for the strength of association between categorical variables. All exposure variables (Independent factors) were cross-checked with the dependent variable (utilization of hospital delivery at PGH Garissa) and determine which ones had significant association. Odds Ratio (OR) and 95% Confidence Interval (CI) were used to estimate the strength of association between independent variables and the dependent variable. The threshold for statistical significance was set at $p<0.05$.

All identified independent variables that were significantly associated with *'utilization of hospital delivery at PGH Garissa'* at bivariate analysis were considered together in a Multivariable analysis. This was performed using Binary logistic regression where backward conditional method was specified in order to identify confounders and/or effect modifiers. Adjusted odds Ratio (AOR) with corresponding 95% Confidence Interval (CI) were used to estimate the strength of association between the retained independent predictors of *'utilization of hospital delivery at PGH Garissa'*. A theoretical equation of the logistic model is as follows.

$$\text{Log (Risk)} = \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \ldots\ldots\ldots + \beta_n Xn$$

$$\text{Exp (Log (Risk))} = \text{Exp} (\beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \ldots\ldots + \beta_n Xn)$$

$$\text{Risk} = (e)^{X1}(e)^{X2}(e)^{X3}\ldots\ldots\ldots(e)^{Xn}$$

Where log. Risk = representation of utilization of hospital delivery at Garissa PGH.

Possible outcome (logit=1, 0)

X1=1 if Age in years $\leq$25; X1=0 otherwise.

X2=1 if Main reason for coming to hospital is ANC; X2 =0 otherwise.

X3= 1 if Ever delivered at Garissa PGH = 'Yes'; X3=0 otherwise.

X4= 1 if Last delivery at Garissa PGH is with 2 years; X4=0 otherwise

X5= 1 if Quality of services at Garissa PGH is excellent/good; X5=0 otherwise

X6 = 1 if Willingness to advice someone to deliver at Garissa PGH = yes; X6 is 0 otherwise

X7= if Existing belief that refrain the mother to deliver at Hospital = 'Yes'; X7=0 otherwise.

X8= 1 if Who decides from where to deliver when pregnant = self or husband; X8 =0 otherwise

X9 or X10=1 if Distance to reach Garissa PGH <4 or 4-6 km respectively; X9 or X10=0 otherwise.

X11= 1 if Willingness to deliver in other maternity services near residence = yes; X11=0 otherwise

X12= 1 if Having preferences on staff gender to deliver at the hospital =yes ; X12 = 0 otherwise.

4.7 Limitations of study

PGH Garissa is situated in more urbanized centre (Garissa town) and mainly accessed by clients that may be influenced by urbanization. On the same note, the study purely targeted women who were already accessing PGH and therefore did not assess the perception of other women who may be using other hospitals within the town or those who opted for the traditional methods. The study also only managed to collect the views of those who attended during the study period leaving out those who came after study ended. While these might affect generalization of the study results, the hospital still attracts many clients from far and wide because of its superiority in providing specialized services and therefore may still make it to fairly represent clients' diverse background within the province.

4.8 Minimization of the biases and errors

To reduce bias related to the sampling procedure, the study only focused on women who sort maternal and child health services from PGH Garissa**.** Though there are other health facilities that provides similar services in the town, assumption was made that women will be consistent in their health seeking behaviour (those attending the ANC clinic will deliver in the same hospital). Again because majority of the clients from within Garissa municipality attends PGH's MCH clinic, it was expected that they fairly represented the Garissa's population.

To reduce biases during the data collection, the enumerators were trained on how to conduct interviews and collect information. The data collection tools were pre-tested in different but similar area. The principal investigator supervised the enumerators and verified the data collected on daily basis.

4.9 Ethical consideration

This research did not involve invasive procedures and therefore was not expected to cause any direct harm to the participants. Study objectives were explained to the participants by the research assistants who also provided them with a written consent form that was translated into both English and the local language (Somali). The clients were informed that the information they gave was confidential and they were allowed to withdraw at any stage in case they felt so. They were clearly informed that their refusal/withdrawal will not have any punitive consequences in their health services seeking right.

The investigator received ethical clearance from the KNH/university of Nairobi ethical committee. He also got permission from both provincial director of medical services and the hospital management team where the study was carried out.

In case of concerns and clarification, the participants were provided with the contact of the principal investigator including his mobile number and email as well as the approving ethic committee (KNH/UON).

CHAPTER 5; STUDY RESULTS

This study was carried with the aim of understanding factors that are associated with utilization of hospital delivery at Garissa Provincial General Hospital**.** Thus; women who sort various maternal health services; namely antenatal care, postnatal care, immunization, maternity services at the hospital were interviewed. This was followed with 3 Focus Group Discussions that targeted the same population but using in different clients at different days. In total, 431 persons (399 one-to-one interviews and 32 FGD) participated during the 46 day study (21st November 2011 o 5th January 2012).

The generated and analyzed data are presented separately- quantitatively and qualitatively. Firstly, the quantitative descriptive results with the various variables – social demographic, women factors, health facility and health workers factors are discussed. These are followed by the results of the respective statistical tests (Bivariates and multivariate) and the outcome of their associations. Thereafter, the chapter presents the findings of the qualitative results.

5.1. Analysis of the quantitative data

A total of 399 women seeking various maternal and child health services at Garissa Provincial General Hospital (PGH), a level 5 hospital, were interviewed. Information on selected demographic characteristics and various aspects of health care provision was collected and presented as below.

5.1.1 Demographic characteristics of the participating women.

Tables 1 and 2 presents selected demographic characteristics of the study participants.

5.1.1.1 Age of the women

The highest proportions of the mothers (52.1%) were aged between 20 and 25 years, with small proportions (7.8% and 11.8%) aged less than 20 years and above 30 years respectively.

5.1.1.2 Religion of the participants

In term of religions, Muslim was the predominant religion accounting for 79.2% of the participants with the rest representing Christianity.

5.1.1.3 Marital status of the participants

On the marital status, the greater majority of the participants were married (93.2%) with only 4.3% said to be single.

5.1.1.4 Education level (secular)

More than half of the participants (58.1%) had no secular education with 11.3% having secondary or higher.

5.1.1.5 Religious education

In terms of religious education, a high proportion of the participants (69.9%) had attended Dugsi (Quran learning centre). However, only 20.6% complete the Quran while 49.3% reported incomplete Quran. About 5% of the participants are said to have attended madarasa (Islamic institution).

5.1.1.6 Main occupation of the participants

A significant majority of the participants (90.5%) were housewives. Only 3% were employed while 5.3% carryout business.

Table 1: Social demographic characteristics of the mothers

	N=399	
Variables	**n**	**%**
Age in years		
<20	31	7.8
20-25	208	52.1
26-30	113	28.3
>30	47	11.8
Religion		
Muslim	317	79.4

Christian	82	20.6
Marital status		
Single	17	4.3
Married	372	93.2
Divorced/separated	8	2.0
Widow	1	0.3
Other	1	0.3
Highest level of secular education		
None	232	58.1
Incomplete primary	63	15.8
Completed primary	59	14.8
Secondary	18	4.5
Secondary incomplete	26	6.5
College middle level and above	1	0.3
Highest religion education attended		
None	85	25.1
Dugsi complete quran	70	20.6
Dugsi incomplete quran	167	49.3
Madrasa primary	13	3.8
Madrasa secondary and above	4	1.2
Missing	60	
Main occupation		
Housewife	361	90.5
Employee	12	3.0

Business	21	5.3
Other	5	1.3

5.1.1.7 Parity of the women

A high proportion of the mothers (53.6%) had between 1 and 2 parity, the smallest proportion (6.3%) having more than 6 children.

5.1.1.8 Reason for coming to PGH

When asked why they came to PGH, a greater majority (69.9%) had came for Antenatal care, with 12.0% coming for delivery and 11.8% for immunization. 6.3% came for other reasons including FP services.

5.1.1.9 Gestation during clinic visit

Out of 279 coming for ANC, 68.9% were in their 25th or more weeks. Only 23 mothers, constituting 8.25 came to ANC with a gestation of less than 16 weeks.

Table 2, social demographic characteristics of the participants

Variables	**N=399**	
	N	**%**
Parity		
1-2	214	53.6
3-4	108	27.1
5-6	52	13.0
>6	25	6.3
Main reason for coming to hospital		
ANC	279	69.9

Immunization/weighing	47	11.8
Delivery	48	12.0
Other	25	6.3
Duration of pregnancy in weeks		
<16 weeks	23	8.2
16 - 24 weeks	64	22.9
25 - 32 weeks	126	45.2
>32 weeks	66	23.7
Not applicable	120	

5.1.2 Women/Client factor

The survey participants were asked whether they ever delivered at Garissa PGH and when was it. More than half the participants (59.1%) reported to have ever delivered at Garissa PGH, 71.6% having delivered within the last 2 years.

Similarly, the women were assessed for their perception on quality of the services delivered by the hospital. Out of 236 participants who ever delivered at Garissa PGH, a significant majority (94.9%) reported in favor of the quality of services they received. Out of the 12 that rated the service as poor, 83.3% raised issues to do with poor staff attitudes. On further probing with regard to the participants preferred place of delivery while pregnant, an overwhelming majority (88.7%) indicated that they would prefer going to deliver at Garissa PGH. This is presented in Figure 2.

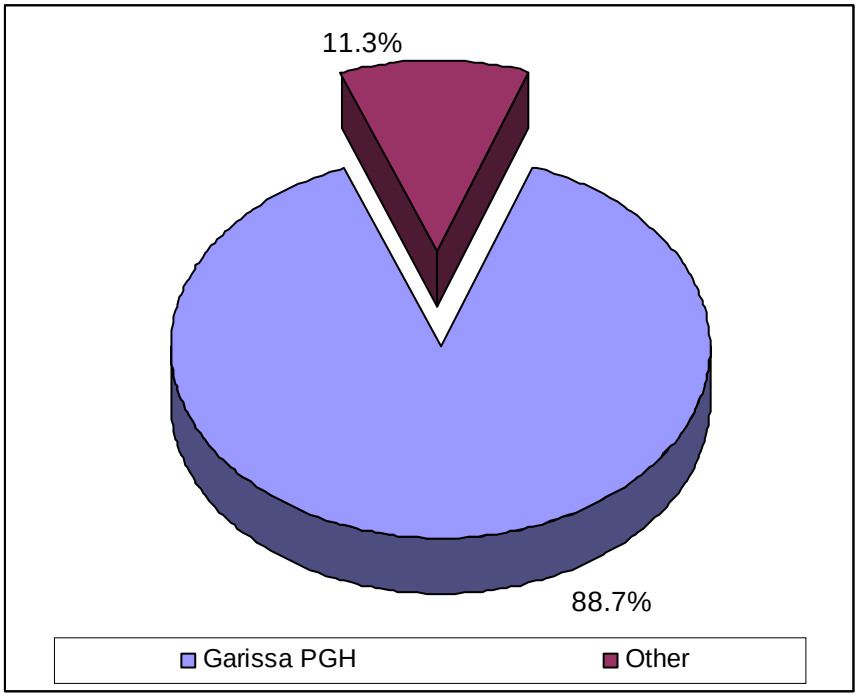


Figure 2: Preferred place of delivery while pregnant

Out of 19 who preferred home delivery, 89.5% indicated that they would prefer being assisted by a Traditional Birth attendant (TBA). Surprisingly, a further probe revealed that 92.5% of the participants would advice someone to deliver at Garissa PGH in case they get pregnant.

Cultural beliefs and practices that refrains the mothers to deliver in a Hospital were cited by a small proportion of the participants (5.3%) with large number (94.7%) stating no cultural beliefs and other practices that refrain them to deliver in a hospital. The only two sources of beliefs that were mentioned as obstacles to hospital deliveries were comparable i.e. Religion (47.6%) and culture (52.4%).

It was interesting to find out that there was minimal interference on decision about place of delivery by other family members. An overwhelming majority of participants (96.8%) indicated that the decision on where to deliver when pregnant was done by self (54.4%) or husband (42.4%) representing 96.8% of the study population.

Table 3: Women factors in relation to their perception on quality of services, religion/ cultural belief and influence of the TBA

Variables	N=399		Variables	N=399	
	n	%		n	%
Ever delivered at Garissa PGH			**If home, preferred attendant**		
Yes	236	59.1	TBA	17	89.5
No	163	40.9	Relatives	1	5.3
Last delivery at Garissa PGH			Self	1	5.3
<1 year ago	90	38.1	Not applicable	380	
1 - 2 years ago	79	33.5	**Will advice someone to deliver at Garissa PGH**		
3 - 4 years ago	48	20.4	Yes	369	92.5
>4 years ago	19	8.1	No	30	7.5
Not applicable	163		**Existing belief that refrain the mother to deliver at Hospital**		
			Yes	21	5.3
Quality of services at Garissa PGH			No	378	94.7
Excellent	10	4.2	**If yes, which one**		
Very good	41	17.4	Religion	10	47.6
Good	173	73.3	Cultural	11	52.4

Poor	10	4.2	Not applicable	378	
Very poor	2	0.8	**Who decides where you deliver when pregnant**		
Not applicable	163		Self	217	54.4
If poor, why			Husband	169	42.4
Poor staff attitudes	10	83.3	Mother	6	1.5
Served by students	1	8.3	Father	2	0.5
Sharing of beds	1	8.3	Mother in law	4	1
Not applicable	387		Others	1	0.3
Preferred place of delivery while pregnant					
Garissa PGH	354	88.7			
Home	19	4.8			
Other GOK hospitals	9	2.3			
Private hospitals	2	0.5			
Other	15	3.7			

5.1.4 Health facility factors

The participants were assessed on the role of health facility related factors that may enhance or hinder their effort to access maternity services at PGH Garissa. These were mainly distance, costs and quality of the services provided by the hospital. A summary of the findings is in Table 4.

When asked the distance they cover to reach PGH, Garissa, almost three-quarter of the participants (73.6%) reside less than 4 kilometres from Garissa PGH. Slightly more than one-quarter (27.8%) indicated that distance to reach Garissa PGH maternity is a problem. While nearly a quarter (24.6%) walk to Garissa PGH, 17.5% use public means. The rest (57.9%) use family car, taxi and in rare cases ambulance.

Part of the question was if there exist other maternity services near their residence. About 24% of the participants reported there indeed existed a maternity service near their residences. However, Out of 94 participants that reported existence of other maternity services near their residence, only 21 (22.3%) indicated their willingness to use these maternity services, another indication that mothers still prefer to use PGH Garissa maternity.

When asked who paid their hospital charges last time they delivered at PGH Garissa, Out of 236 who delivered at Garissa PGH, a greater majority (78.8%) were assisted to pay hospital charges by family members while other relatives account for 11.0%. The identified Government/donors contribution was very minimal (2.5%). This might be due to scarcity of financial resources in this region in which slightly over a quarter (25.3%) indicated that indeed hospital cost prevents people to deliver in a hospital.

Regarding service provisions at Garissa PGH, the most commonly mentioned services the mothers liked include; Staff attitude (62.3%), Facility cleanliness (57.6%), Availability of medical supplies (33.5%) and time taken to be attended (21.6%). On the contrary, the most commonly mentioned services the mothers disliked were lack of psycho-social support (20.3%) and long time taken to be seen (19.9%). Lack of privacy was also mentioned by 12.7%.

Table 4: Health facility factors that affects utilization of delivery services at PGH Garissa

	N=399			**N=399**	
Variables	**n**	**%**	**Variables**	**n**	**%**
Distance to Garissa PGH			**Hospital cost prevent someone not to deliver at the hospital**		

< 1km	66	16.5	Yes	101	25.3
1-3km	228	57.1	No	298	74.7
4-6km	75	18.8	**Aspects of PGH service the mother liked**		
more than 6km	30	7.5	Psycho-social support	11	4.7
Other maternity services near residence			Facility cleanliness	136	57.6
Yes	94	23.6	Staff attitude	147	62.3
No	305	76.4	Time taken to be attended	51	21.6
Would deliver in other maternity services			Availability of medical supplies	79	33.5
Yes	21	22.3	Privacy	11	4.7
No	73	77.7	Others	8	3.4
Not applicable	305		Not applicable	163	
Distance to reach Garissa PGH maternity a problem			**Aspects of PGH the mother disliked**		
Yes	111	27.8	No psycho-social support	48	20.3
No	288	72.2	Facility unclean	37	15.7
Means of transport to deliver in hospital			Poor staff attitude	19	8.1
Walking	98	24.6	Long time taken to be attended	47	19.9
Family car	16	4.0	Lack of medical supplies	41	17.4
Taxi	213	53.4	No privacy	30	12.7

Ambulance	2	0.5	Other	1	0.4
Public transport	70	17.5	None	70	29.7
Who paid the hospital charges last time delivered in Garissa PGH			Not applicable	163	
Family	186	78.8			
Other relatives	26	11.0			
Well wishers	3	1.3			
Government/donors	6	2.5			
Others	6	2.5			
Don't know	9	3.8			
Not applicable	163				

5.1.5 Health worker factors

The third factor that was assessed during the study was related to health workers. These covers staff gender and their attitudes**.** Table 5 presents a summary of health workers factors.

The study participants were asked their gender preferences. Approximately two-thirds of the participants (66.2%) have preferences on staff gender to assist them in delivery at the hospital, 92.0% indicating preference to females. Surprisingly, 90.2% of the 264 that indicated preferences on staff gender revealed that lack of preferred gender in the facility will not stop them to deliver in the hospital.

When the participants were asked how they perceived staff attitude in relation to their previous experience, out of 236 who have ever delivered at Garissa PGH, an overwhelming majority (94.5%) reported in favor of staff attitudes during delivery. When further probed whether staff

attitude impact on future utilization of maternity services, 33.9% indicated that staff attitude affect utilization of the future maternity services.

Table 5. Health workers factors that affects utilization of hospital delivery

Variables	**N=399**	**%**
Have preferences on staff gender to deliver her at the hospital		
Yes	264	66.2
No	135	33.8
Preferences on staff gender to deliver the mother at the hospital		
Male	21	8.0
Female	243	92.0
Not applicable	135	
Lack of preferred gender stops her to deliver in the hospital		
Yes	26	9.8
No	238	90.2
Not applicable	135	
Staff attitudes during delivery at Garissa PGH		
Excellent	5	2.1
Very good	53	22.5
Good	165	69.9
Poor	12	5.1

Very poor	1	0.4
Not applicable	163	
Staff attitude affect utilization of the maternity		
Yes	80	33.9
No	156	66.1
Not applicable	163	

5.1.6 Analysis of the association between utilization of Garissa PGH maternity services and various factors

This section determined the association between utilization of PGH Garissa maternity services (dependent variable) and various factors under study (independent variables). These are social demographic factors of the participants, women/clients, health facility as well as health workers factors. To get more in-depth relationship between these factors against the dependent variable ie; utilization of maternity services at PGH Garissa, a bivariate and multivariable analysis was done.

5.1.6.1 Bivariate analysis

Utilization of Garissa PGH in relation to social demographic characteristics

Relationship between utilization of hospital deliveries at Garissa PGH and selected demographic characteristics was analyzed as presented in Table 6.

Out of six selected social demographic characteristics, only one emerged to relate with utilization of Garissa PGH maternity services. A significantly high proportion of mothers aged $\leq$25 years showed willingness to utilize Garissa PGH (92.5%) compared to those aged >25 years (83.1%), (OR=2.49; 95% CI: 1.32 – 4.70; p=0.004).

Table 6: Utilization of Garissa PGH in relation to social demographic characteristics

Variables	Garissa PGH (N=354)		Other (N=45)		OR	95% CI		p value
	n	%	n	%		Lower	Upper	
Age in years								
≤25	221	92.5	18	7.5	2.49	1.32	4.70	**0.004**
>25	133	83.1	27	16.9	Reference			
Religion								
Muslim	282	89.0	35	11.0	1.12	0.53	2.37	0.768
Christian	72	87.8	10	12.2	Reference			
Marital status								
Currently not married	23	85.2	4	14.8	0.71	0.23	2.16	0.547
Currently married	331	89.0	41	11.0	Reference			
Highest level of education								
None	206	88.8	26	11.2	Reference			
Primary	111	91.0	11	9.0	1.27	0.61	2.67	0.523
Secondary and above	37	82.2	8	17.8	0.58	0.25	1.39	0.223
Highest education attended								
None	77	90.6	8	9.4	Reference			
Dugsi	210	88.6	27	11.4	0.81	0.35	1.86	0.615

Madrasa and above	17	100.0	0	0.0	UD	UD	UD	0.998
Missing	50		10					
Main occupation								
Housewife	322	89.2	39	10.8	1.55	0.61	3.94	0.355
Generating some income	32	84.2	6	15.8	Reference			

Utilization of maternity services at Garissa PGH in relation to maternal characteristic of the study population

Relationship between maternity utilization of Garissa PGH and maternal factors was analyzed as presented in Tables 7.

Out of two maternal factors, one emerged to relate with utilization of Garissa PGH. A significantly high proportion of mothers coming for ANC services showed willingness to utilize Garissa PGH (92.1%) compared to those coming for Immunization/weighing (80.9%), (OR=2.41; 95% CI: 1.04 – 5.54; p=0.039).

Table 7: Utilization of maternity services at Garissa PGH in relation to maternal characteristics

Variables	**Garissa PGH (N=354)**		**Other (N=45)**		**OR**	**95% CI**		**p value**
	n	**%**	**n**	**%**		**Lower**	**Upper**	
Parity								
0-2	197	92.1	17	7.9	2.14	0.97	4.72	0.059
3-4	92	85.2	16	14.8	1.06	0.47	2.39	0.886
5 or more	65	84.4	12	15.6	Reference			
Main reason for coming to hospital								
ANC	254	91.0	25	9.0	2.41	1.04	5.54	**0.039**

Delivery	41	85.4	7	14.6	1.39	0.47	4.09	0.553
Other	21	84.0	4	16.0	1.24	0.34	4.53	0.741
Immunization/weighing	38	80.9	9	19.1	Reference			

Utilization of maternity services at Garissa PGH in relation to women factors

Relationship between utilization of maternity services at Garissa PGH and Quality of the Services provided in Garissa PGH was analyzed as presented in Tables 8. All the six Quality of the Services factors emerged to relate with utilization of Garissa PGH.

A significantly high proportion of mothers who indicated history of delivery at Garissa PGH showed willingness to utilize Garissa PGH (91.9%) compared to those without history of delivery at Garissa PGH (84.0%), (OR=2.17; 95% CI: 1.16 – 4.07; p=0.014). Specifically, majority of those who delivered $\leq$ 2 years ago showed willingness to utilize Garissa PGH (93.5%) compared to those without history of delivery at Garissa PGH (84.0%), (OR=2.73; 95% CI: 1.30 – 5.72; p=0.008).

In the same token, majority of those who reported in favor of quality of service showed willingness to utilize Garissa PGH (95.1%) compared to those without history of delivery at Garissa PGH (84.0%), (OR=3.67; 95% CI: 1.76 – 7.68; p=0.001). There was reduced willingness to utilize Garissa PGH in future among those who reported poor performance on quality of service provided (33.3%) compared to those without history of delivery at Garissa PGH (84.0%), (OR=0.09; 95% CI: 0.03 – 0.34; p<0.001).

Majority of the participants who indicated that they would advice someone to deliver at Garissa PGH showed willingness to utilize Garissa PGH (95.1%) compared to those that would not advice (10.0%), (OR=175.50; 95% CI: 48.63 – 633.36; p<0.001).

Non-existence of religion and cultural belief were associated with increased willingness to utilize Garissa PGH among the women (90.7%) compared to existence of religion and cultural beliefs (52.4%), (OR=9.09; 95% CI: 3.57 – 25.00; p<0.001).

A significantly high proportion of the mothers who indicated that they normally make self decision from where they want to deliver showed willingness to utilize Garissa PGH (87.6%) compared to those decided upon by relatives other than the husband (61.5%), (OR=4.40; 95% CI: 1.34 – 14.43; p=0.015). An even higher proportion of mothers who indicated that decision from where they want to deliver is normally done by the husband showed willingness to utilize Garissa PGH (92.3%) compared to those decided upon by relatives other than the husband (61.5%), (OR=7.50; 95% CI: 2.14 – 26.24; p=0.002).

Table 8: Utilization of maternity services at Garissa PGH in relation to women factors

	Garissa PGH (N=354)		**Other (N=45)**			**95% CI**		
Variables	**n**	**%**	**n**	**%**	**OR**	**Lower**	**Upper**	**p value**
Ever delivered at Garissa PGH								
Yes	217	91.9	19	8.1	2.17	1.16	4.07	**0.014**
No	137	84.0	26	16.0	Reference			
When delivered at Garissa PGH								
<=2 years ago	158	93.5	11	6.5	2.73	1.30	5.72	**0.008**
>2 years ago	59	88.1	8	11.9	1.40	0.60	3.27	0.438
Never delivered at Garissa PGH	137	84.0	26	16.0	Reference			
Quality of services								
Good	213	95.1	11	5.9	3.67	1.76	7.68	**0.001**

Poor	4	33.3	8	66.7	0.09	0.03	0.34	<**0.001**
Never delivered at Garissa PGH	137	84.0	26	16.0	Reference			
Would advice someone to deliver at Garissa PGH								
Yes	351	95.1	18	4.9	175.50	48.63	633.36	<**0.001**
No	3	10.0	27	90.0	Reference			
Existing belief that refrain the mother to deliver at Hospital								
Yes	11	52.4	10	47.6	Reference			
No	343	90.7	35	9.3	9.09	3.57	25.00	<**0.001**
Who decides where you deliver when pregnant								
Self	190	87.6	27	12.4	4.40	1.34	14.43	**0.015**
Husband	156	92.3	13	7.7	7.50	2.14	26.24	**0.002**
Others	8	61.5	5	38.5	Reference			

Utilization of maternity services at Garissa PGH in relation to health facility factors

Relationship between maternity services utilization of Garissa PGH and health facility factors was analyzed as presented in Tables 9. Out of six health facility factors, three emerged to relate with utilization of Garissa PGH.

Majority of the participants who resided less than 4 kilometers from Garissa PGH showed willingness to utilize Garissa PGH (91.2%) compared to those residing more than 6 kilometers from Garissa PGH (73.3%), (OR=3.75; 95% CI: 1.52 – 9.25; p=0.004). A significantly low proportion of the participants experiencing a problem in terms of distance to reach Garissa PGH

showed willingness to utilize Garissa PGH (81.1%) compared to those not experiencing a problem (91.7%), (OR=0.39; 95% CI: 0.21 – 0.73; p=0.003).

Although existence of other maternity services near residence did not relate significantly with willingness to utilize Garissa PGH, a significantly low proportion of those indicating willingness to deliver in this maternity services showed willingness to utilize Garissa PGH (61.9%) compared to those indicating non-existence of other maternity services near residence (89.8%), (OR=0.18; 95% CI: 0.07 – 0.48; p=0.001).

Table 9: Utilization of maternity services at Garissa PGH in relation to health facility factors

Variables	Garissa PGH (N=354)		Other (N=45)		OR	95% CI		p value
	n	%	n	%		Lower	Upper	
Distance to Garissa PGH								
<4 km	268	91.2	26	8.8	3.75	1.52	9.25	**0.004**
4 – 6 km	64	85.3	11	14.7	2.12	0.75	5.94	0.154
>6 km	22	73.3	8	26.7	Reference			
Other maternity services near residence								
Yes	80	85.1	14	14.9	0.65	0.33	1.27	0.205
No	274	89.8	31	10.2	Reference			
Would deliver in other available maternity services								
Yes	13	61.9	8	38.1	0.18	0.07	0.48	**0.001**
No	67	91.8	6	8.2	1.26	0.51	3.15	0.616

No other maternity available	274	89.8	31	10.2	Reference			
Distance to reach Garissa PGH maternity a problem								
Yes	90	81.1	21	18.9	0.39	0.21	0.73	**0.003**
No	264	91.7	24	8.3	Reference			
Means of transport to deliver in hospital								
Walking	92	93.9	6	6.1	2.26	0.77	6.68	0.139
Family car/taxi/ambulance	201	87.0	30	13.0	0.99	0.45	2.20	0.977
Public transport	61	87.1	9	12.9	Reference			
Hospital cost prevent the mother to deliver at the hospital								
Yes	85	84.2	16	15.8	0.57	0.30	1.11	0.093
No	269	90.3	29	9.7	Reference			

Utilization of maternity services at Garissa PGH in relation to health worker factors

Relationship between maternity service utilization of Garissa PGH and the health work factors were analyzed as presented in Figure 2.

Majority of the participants without staff gender preference during delivery showed willingness to utilize Garissa PGH (93.3%) compared to those with staff gender preference (86.4%), (OR=2.22; 95% CI: 1.03 – 4.76; p=0.037).

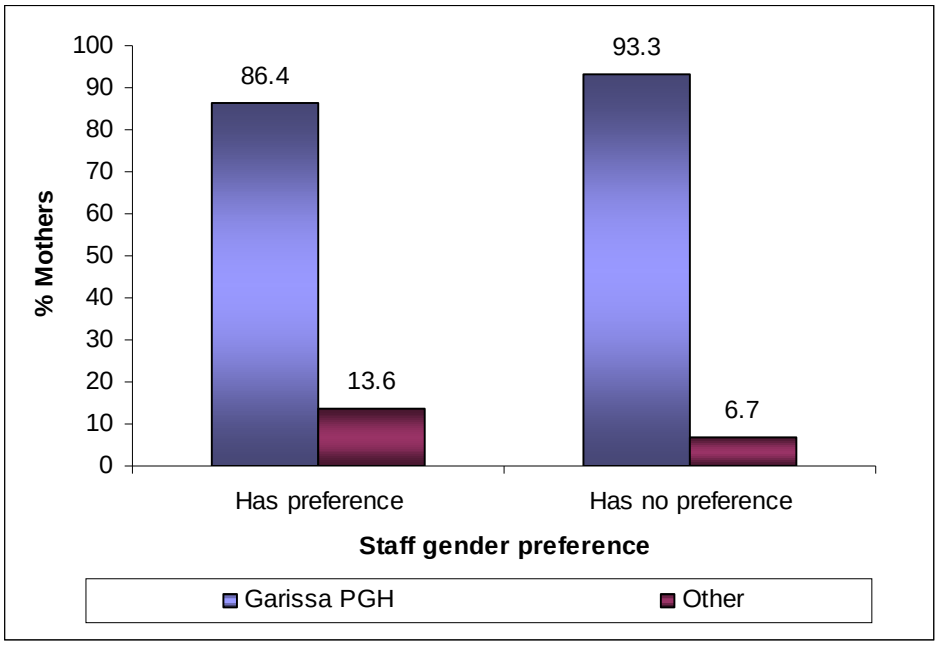


Figure 3: Utilization of Garissa PGH in relation to staff gender preference during delivery

5.1.6.2 Multivariable analysis

Multivariable analysis was performed in order to identify independent predictor(s) of utilization of Garissa PGH among the participants. Twelve factors associated with utilization of Garissa PGH at P<0.05 during bivariate analysis were considered for multivariable analysis. They include; (1) Age in years (2) Main reason for coming to hospital, (3) Ever delivered at Garissa PGH, (4) Last delivery at Garissa PGH, (5) Quality of services at Garissa PGH, (6) Willingness to advice someone to deliver at Garissa PGH, (7) Existing belief that refrain the mother to deliver at Hospital, (8) Who decides from where to deliver when pregnant, (9) Distance to Garissa PGH, (10) Willingness to deliver in other maternity services near residence, (11) Distance to reach Garissa PGH maternity a problem and (12) Having preferences on staff gender to deliver at the hospital.

Upon fitting the factors using Binary Logistic regression and specifying *'backward conditional'* method with removal at P<0.05, four factor was retained in the final model as shown in **Table 10**.

Table 10: Predictors of utilization of delivery services at Garissa PGH among the factors

Predictors	β	s.e. (β)	AOR [ψ]	95% CI [φ]		p value [*]
				Lower	Upper	
Age in years						
≤25	1.04	0.35	2.83	1.42	5.65	**0.003**
>25			Reference			
Ever delivered at Garissa PGH						
Yes	1.27	0.37	3.55	1.7	7.4	**0.001**
No			Reference			
Existing belief that refrain the mother to deliver at Hospital						
Yes			Reference			
No	2.23	0.54	9.09	3.23	25	**<0.001**
Distance to Garissa PGH						
<4 km	1.58	0.55	4.83	1.65	14.17	**0.004**
4 - 6 km	0.51	0.60	1.67	0.52	5.39	0.389
>6 km			Reference			

[*] Significant at p<0.05 bolded; [ψ] Adjusted odds ratio**;** [φ] 95% Confidence Interval

Risk = $(e)^{1.04*X1}(e)^{1.27*X2}(e)^{2.23*X3}(e)^{1.58*X4}(e)^{0.51*X5}$

Possible outcome (logit=1, 0)

X1=1 if **Age in years** ≤25; X1=0 otherwise.

X2=1 if **Ever delivered at Garissa PGH** = 'Yes'; X2=0 otherwise.

X3=1 if **Existing belief that refrain the mother to deliver at Hospital** = 'Yes'; X3=0 otherwise.

X4 or X5=1 if **Distance to Garissa PGH** <4 or 4-6 km respectively; X4 or X5=0 otherwise.

Adjusting for other factors and keeping them constant, age ≤25years was associated with utilization of delivery services at Garissa PGH (AOR=2.83; 95% CI: 1.42 – 5.65; p=0.003). A mother aged 25 years or less is 2.83 times more likely to utilize delivery services at Garissa PGH compared to one aged more than 25 years.

History of delivery at Garissa PGH was associated with utilization of delivery services at Garissa PGH (AOR=3.55; 95% CI: 1.70 – 7.40; p=0.001). A mother with history of delivery at Garissa PGH is 3.55 times more likely to utilize delivery services at Garissa PGH compared to one without history of delivery.

Non-existence of belief that refrain mothers from going to deliver in a hospital was associated with utilization of delivery services at Garissa PGH (AOR=9.09; 95% CI: 3.23 – 25.00; p<0.001). A mother without any beliefs that refrains her from going to deliver in a hospital is 9.09 times more likely to utilize delivery services at Garissa PGH compared to one with certain beliefs.

Residing less than 6 kilometers from Garissa PGH was associated with utilization of delivery services at Garissa PGH (AOR=4.83; 95% CI: 1.65 – 14.17; p=0.004). A mother residing less than 4 kilometers or between 4 to 6 kilometers from Garissa PGH is 4.83 and 1.67 times more likely to utilize delivery services at Garissa PGH respectively compared to one residing more than 6 kilometers

5.2. Qualitative results

5.2.1 Qualitative data analysis

To supplement the structured questionnaire and get in-depth information of the survey, 3 Focus Group Discussions (FGDs) were purposively selected in different days. These groups represented one each from pregnant women who came to the ANC for their routine checkup, women who came for other services like immunization, postnatal care, family planning etc but have experience in delivery at PGH Garissa, and women who just delivered in the hospital and were still in the maternity ward during the survey. The number of participants in the FGD was between 10 to 12 women with average time discussions of 38 minutes. With help of FGD guide, the principal investigator moderated while a research assistant took the notes. The sessions were audio tapped.

Immediately after the interviews, the discussions were transcribed and analysed with major themes grouped together. Afterwards, the different discussions from the various FGDs were systematically re-analyzed and further major themes developed and re-grouped together making comprehensive statements. Remarkable statements made by the participants that raised specific issues were directly translated into English and quoted as part of the narratives.

Below are summary of results from the qualitative discussions which are presented in relation to the factors under investigation:

5.2.2 Women Factor

Where will women prefer to deliver?

During the FGD, the participants were asked where they think women will prefer to deliver and what are the reasons? In this regard, the majority of the women think mothers would have wished to deliver in hospital. They especially believe majority of Garissa residents actually deliver in the hospitals. However, some said that some women still deliver at home either by choice or by other circumstances. The reason for choosing to deliver in hospital, according to them, is that hospital delivery minimizes the risk associated with delivery especially during

complications which if they occur, they believe, cannot be managed at home and therefore will still be referred to hospital for proper management as this woman who came for ANC stated it.

Delivering at hospital will help the mother to avoid getting life threatening complications like excessive bleeding which she may not get when (delivering) at home…

Others mentioned mothers will also get services like immunization for the baby immediately after delivery.

For those who say women still deliver at home, various reasons were mentioned; including lack of knowledge by the women in understanding the benefit of hospital delivery. However, according to the interviewees, some of these women are forced by other circumstances like lack of transport or the money to pay the hospital charges.

Many cannot afford transport and other cost associated with deliveries and therefore will be forced to deliver at home… this also is possible in towns (women who came for immunization)

Women perception in using maternity services at Garissa PGH

The participants were asked specifically what they think of using maternity services at Garissa PGH. Generally speaking, majority of the mothers showed a positive opinion specially the comprehensive services the hospital provides. Nevertheless, many women complained about some challenges they face when they seek these services. While some mentioned the difficulties they encounter with lower staff like security guards and cleaners, some said that the nurses are unfriendly and less sensitive.

"*Sometimes nurses will tell you're (delivery) time is too far and will advise you to return home. Many a times the women will deliver on their way home…a perfect case happened recently when a woman returned from maternity delivered at out-patient on her way home* . (group of women at maternity complained)

"The staff rarely monitor the patients (progress) once admitted – last night I have to go to them several times to tell them something is not going well at nursery, until they came late when already a baby died and mine was serious .I feel like not coming again" (women at maternity during the interview)

*" I saw a mother next to me who was in labour and started screaming till the baby came our with no assistance and was nearly to fall to the floor (baby). The nurses came running when the baby was already outside…. There is no proper care in the hospital". (*Women who came for immunization)

One particular mother claimed she delivered 3 babies at Garissa PGH but believes the services are deteriorating compare to her previous deliveries.

*" I delivered at the PGH 3 times previously, the first two deliveries were good but the last one was just terrible. This was 2.5 months ago. The 'doctors' are reluctant and not responsive to our need. They don't give drugs" (*mothers who came for immunization/FP at MCH).

During the discussion; it also came out strongly the dislike of surgical intervention especially caesarian section (s/c) during complications at PGH Garissa.

*"The Doctors just force the women to undergo operations sometimes when not necessary…" (*participants who came for ANC claimed*)*

The role of belief, culture or religion in influencing hospital delivery

The women were asked if there are any believes, culture or religious teaching that influence their effort to seek maternity services. Everyone was in agreement that there is absolutely no belief, culture or religion that refrain women from using any hospital services. On the contrary, they said in many cases even the *sheikhs* are encouraging women to seek maternity services. The only challenge that is mentioned and said to be not compatible with their religion is men delivering women in the maternity.

…. sheikhs are encouraging women to deliver where there are women- manned- maternities (mothers at MCH for immunization services)

Islam is clear on this (*deliveries) and sheikh says repeatedly that women should be delivered by women ….. It is sinful for man to touch opposite sex leave alone seeing her private part. This is unacceptable in Islam… (*pregnant women who came for ANC service**)***

Decision makers on where a pregnant woman should deliver

The participants were asked about decision making process in regards to where a pregnant woman will deliver. Majority of the women were on agreement that the issue in many occasion is a consensus between the married couple. In many times, the pregnant woman herself will suggest where to deliver and family members will agree**.** They agreed that the old women's influence is fading especially in big towns in relation to where pregnant women should deliver. Nonetheless, there are those who said that the parents especially mother-in-laws play a role in deciding for their daughters.

The opinions of the parents (including in-laws) are always respected among the Somali culture…. But nowadays the couples have a great say on where the pregnant woman should deliver (ANC attendants)

Apparently, as indicated in the following quotes, the women especially the young and educated lots seems to be regaining 'powers' as far as decision on where to deliver is concerned. The old mothers are also confirming this development.

….It is you who is in pain when in labour, and therefore you should decide where to relief that pain…. (young mothers at the maternity*)*

Nowadays the ladies don't even wait until decision is made… you only hear that she is already in the hospital…. Like today, I only heard that she is in the hospital and I followed her here (old women who visited her daughter in-law in maternity ward)

5.2.3 Health facility Factors

5.2.3.1 Distance from health facility

To assess if distance is a problem in accessing maternity services at PGH, Garissa, the women were asked their views. Many women said that PGH is accessible particularly within Garissa town though in many times, as they put it, a transport is required especially when a woman is in labour as they claim, it is difficult for woman in pain to walk.

"It's difficult for a laboring woman to walk for a long distance… and Taxi cannot be afforded by everyone especially the poor and therefore that may discourage them to come to the hospital". (women at the antenatal clinic)

"Sometimes it depends where you live in Garissa. Some bullas (villages) are too far from the hospital and taxis are expensive and therefore become difficult for those who cannot afford" (Mothers who brought her child to immunization).

Generally, most of the women were for the idea that though distance can be a challenge, if the intention is to come to the hospital, they will still make it.

5.2.3.2 Cost in delivering hospital

Part of the discussion was to see women perception concerning the effect of cost in relation to delivery. Women agree that cost is always there; whether you deliver at home or hospital. They even belief that delivery at home is equally expensive if you look in totality including TBA charges. Many of them think hospital charges will not prevent a woman to deliver if services are good though some say many women cannot afford hospital charges; and as such, they may decide to deliver at home.

….. *If you understand the benefits of the hospital delivery you will still come to the hospital with or without money (* mothers who brought her baby for immunization)

Unfortunately, some said that they feel a shamed if they are detained in the hospital due to failure paying hospital charges after delivery

It is embarrassing to be detained in hospital for not paying the hospital money …. It is better I deliver at home (women who came for ANC services)

When probed on their knowledge on other mechanism available if a woman cannot pay delivery charges, they stated to have no information about the waiving or voucher system available in the hospital. The indirect cost like transport seems more pronounced than hospital charges as this newly delivered woman in maternity decried

"Today I came from Madogo and paid 500 shillings for the taxi alone and am expecting to pay similar amount when discharged. Currently I've little money and am not sure how much they will ask me to pay (as hospital charges) … but thank God I delivered safely" (A newly delivered woman from Madogo in maternity ward).

5.2.3.2 Quality of maternity services at PGH

The aspects, in terms of services provided by PGH Garissa maternity that makes the clients happy or unhappy.

To gauge the perception of the participants who already utilized the hospital maternity services, they were assessed for what they liked or disliked during their previous experience**.** On the positive note, they are generally happy with the many services provided by the hospital. Specifically, the women mentioned the comprehensive services (operations, laboratory, blood transfusion, specialized doctors) that are available in the hospital especially when they face an emergency condition. Additionally, they mentioned facility cleanliness and the responsiveness of the staff as other aspect they liked**.** .

Comparatively, the women abhorred strongly being delivered by male nurses. The negative attitude of the staff working at the maternity ward featured again. Though majority of the women agreed that most of staff were good, some were said to be rude and abrasive**.** These are said to be both the technical staff like nurses; and support staff like security guards and cleaners.

"They (staff) will start shouting at you when you are in pain and required some sympathy…. Sometimes I wonder why I came here in the first place (a woman who came for ANC service but delivered severally at the hospital stated).

Similarly, poor beddings, lack of mosquito nets as well s shortages of some essential supplies like cotton wool were also mentioned as one of the negative experience. This lady in maternity put it this way;

"The nurse will give you one pad after delivery which you need to change immediately. This means you will require some more which sometimes you are not prepared for. You will be told at

midnight to look for cotton wool. Where will you get even if you have money? The hospital should have this vital supply in plenty"

Surprisingly, with this negative experience, when the participants were asked if they will advice someone to deliver at Garissa PGH, the answers were on the affirmative as they stated that it is more risky to deliver at home or small "Hospital" where, if they face complications, they will be still referred to the PGH.

5.2.4 Health Workers Factors

5.2.4.1 Gender preferences

Majority of the participants are for the idea that female nurses should deliver women at the hospital. The reasons widely mentioned were both religious as well as personal conviction.

The sheikhs are very clear on who should deliver women when in labour …..… it is sinful and will attract the wrath of Allah if you are delivered by the opposite sex … (one woman in the maternity ward stated)

As a woman, I will be comfortable to be delivered by another woman and not opposite sex. I feel shy and disrespected… (A none Somali who came to ANC).

However, when religion as a factor was controlled, many women were of the opinion that male nurses are generally gentle, respectful and have more courtesy than female staff

"Women staff will never sympathize with you when you are in labour as they may probably have already experience the same pain. They will even scream at you to the effect that they will tell you, you enjoyed during conception. Female nurses are bad and rude" (a woman in the maternity stated*)*

"I was delivered by a female nurse in my last delivery and 1 really felt that 1 will never come to hospital. She was very rude and not respectful" (A mother who brought a child for immunization claimed)

Interestingly, the absences of their preferred gender will not stop the women to deliver in hospital. Even those who strongly called for female nurses to be staffed in the maternity ward

agreed that they will still come to the hospital for maternity services with or without their preferred gender.

5.2.3.2 Attitude of the health worker

Perception of women towards the altitudes of health workers during delivery at PGH

The women were inquired their experience on how the health workers handled them during delivery. To this end, there are mix reactions by the participants on the staff attitudes. Majority said that staffs were good with exceptional cases where some staff were too rude and lack courtesy. All the groups who were interviewed widely mentioned the lower staff, namely; the security guards and cleaners as too harsh and lacking sensitivity towards laboring women and their visitors.

The staff are generally good ….though there are those who shout at you when you need their help most…. People at entrance are bad (a women at ANC clinic)

Nevertheless, majority of those who had negative experience said they will still come to PGH for maternity services in future, may be because of lack of alternative hospital with similar services. This woman at the maternity during the discussion summarized it as below

*"When you are in labor pain you need assistance and therefore you have no choice. There is no alternative to PGH as you get many services especially when you get complication. Other hospitals in the town will still refer you here when in complication… its better you bring yourselve in advance***"**

General suggestions by the participants in improving maternity services at Garissa PGH

To summarize the discussions, the participants were asked their suggestions on how to improve the services provided by the maternity wing of the hospital. The issues of medical supplies like cotton wool and mosquito net, increasing the number of female nurses, reduction of delivery cost as well as improving staff attitude were mentioned as areas that they requested the management to improve.

CHAPTER 6; DISCUSSIONS CONCLUSION AND RECOMMENDATIONS

This chapter presents the general discussion that is driven from the results and outcome of the variables that were already analyzed. Using the factors under investigation as a guide, it tried to merge and complements the valuable information revealed by both the quantitative and qualitative methods while bringing out any other new information that can be associated with underlying issues. It also concludes and summaries the information generated while giving the recommendations that guides the action to be addressed both in the short and long run.

6.1. Discussions

Kenya's national reproductive health policy (2007) encourages elimination of factors that may impede equitable access to reproductive services. It particularly mentions those related to financial, social and cultural barriers (MOH, 2007). Previously, slow progress in attainment of maternal and neonatal targets in Kenya was attributed to issues like limited availability of services, poor access and low utilization (MOPHS 2010). This study was carried out with the aim of determining the factors that are associated with utilization of maternity services at Garissa provincial general hospital. Beside the demographic variables, other specific factors that were investigated include women/clients factors (cultural/religious beliefs and TBA influence), Health facility factors (distances, cost and quality of services provided) as well as those related to the health workers like their attitudes and gender.

As a result, the study revealed many issues that may contribute to low utilization of the services provided by the hospital. Whilst some variables are found to be non-significant in the initial analysis, there are those which showed significance but when subjected further statistical test lacked strong association with the dependent variable. However, others still retained their significance at multivariable stage and are confirmed by the qualitative results. The specific factors and information generated are discussed below.

6.1.1 Social Demographic characteristics

Among the social demographic factors that were researched, it is only age that showed highly significance in utilizing PGH Garissa maternity unit. The study showed that women less than 25 years are 2.83 times more likely than women greater than 25 years (AOR=2.83; 95% CI: 1.42 – 5.65; p=0.003). This is against the finding of another research that found age is not associated

with utilization of ANC services among pregnant women in Garissa town (sheikh 2010). However, other researchers in other parts of the world concurred fully with the former (Lieu and Dibley 2007, Nigussie and Mitike, 2004). The qualitative result appear to suggest a similar trend where the women of the younger age seems to advocate hospital delivery.

On a similar note, while the same study and others (Awoyemi et al, 2011**)** shows education of the participants is highly significant in utilization of reproductive health services, this study reveals otherwise in regards to utilization of maternity services in PGH Garissa. About 58% of the research participants in this study have totally no formal education. However, nearly 75% of the participants said to have some form of religious (Islamic) education which may also mask the educational impact. It could be as well be argued that since this study purely targets women who are in urban centre and are already accessing the hospital, their exposure to urbanization may have significantly improved their level of awareness, perhaps reducing the influence of education as a factor.

The study reveals that very few women are coming to ANC within the first 16 weeks of pregnancy. Majority, 68.9% comes after 25^{th} week (3th trimesters). This in reality translates to less mothers attending the 4^{th} ANC as recommended by WHO; thus reducing the quality of the care and confirming KDHS (2008) findings of low 4^{th} ANC visit in the country in general and NEP in particular. Quality ANC service is one of the proven strategies that reduce complications during pregnancy, intra-partum and post-partum (WHO, 2005). Apparently, women who are coming for ANC services show high willingness to deliver in PGH Garissa compare to others who are coming for other services like immunization (OR=2.41; 95% CI: 1.04 – 5.54; p=0.039). However, when other factors were controlled, the multivariable analysis shows this to be insignificant as there is no association between ANC attendance and utilization of PGH Garissa. The lack of the association may construe that by coming to ANC at the hospital may not necessary translate to delivering in the same hospital. The latest KDHS indicates the ANC coverage; both nationally and NEP to be high which doesn't transform to low skilled delivery (KDHS, 2009). This is further supported by another study in Garissa that also shows 83% ANC utilization among women living in Garissa (sheikh, 2010). All these are a pointer that despite high ANC attendance, the same is not translated to a Hospital delivery – at least not in PGH

Garissa. Other maternal characteristics like parity and gestation period has no significance in utilizing PGH Garissa maternity. This is also found in another study (Sheikh, 2010)

Other variables within the social demographic characteristics that have no associations during the multiple statistical tests are religion, marital status, religious education and main occupation. This seems concurred with a similar other studies conducted (Gunter, 2009, sheikh, 2010).

6.1.2 Women/client factor

Factors emanating from the individuals are essential component as it influences on how the person interact with his soundings (Awoyemi et al, 2011**)**. The study was purposely looking into the women related factors as it immensely contributes to utilization of the maternal services. As it was investigating the perception of the women in regards to the maternity services provided at PGH, nearly 59% of the participants reported to have ever delivered at Garissa PGH, almost 72% having delivered within the last 2 years and showed strong indication in future use -OR=2.17; 95% CI: 1.16 – 4.07; p=0.014 and OR=2.73; 95% CI: 1.30 – 5.72; p=0.008 respectively. The association during the multi-variable analysis is even stronger with mothers having history of delivery at Garissa PGH having 3.55 times more likely to utilize delivery services at Garissa PGH compared to one without history of delivery. Additionally, close to 95% of these women have some favor for the quality of the service they received- nearly 73% terming it good while only 5% said it was poor or very poor. Again, almost 89% indicated that PGH is their proffered place of delivery. However, during the in-depth interview (FGD), the women raised a number of concerns against the hospital. Chief among these were issues related to availability of supplies, staff attitude as well as time taken to be attended to. In fact critical analyses of their concerns suggest that they prefer the hospital not because it's the best but they seem to say that they have no other alternative.

Many a times, cultural beliefs are blamed for poor utilization of service delivery especially in a conservative community like Somalis (Ganga-Limando et al 2006, (Boursery et al, 2009). This study found out that very few (5.3%) of the participants mentioned that cultural or religious belief restrain them from utilizing maternity services. Both Uni-variable and multi-variable analysis suggest that non-existence of religious and cultural beliefs are significantly and strongly associated with increased willingness to utilize Garissa PGH among the mothers (AOR=9.09;

95% CI: 3.23 – 25.00; p<0.001). This is in confirmatory with the qualitative results where women even claim the Islamic leaders are openly encouraging women to utilize maternity unit; though on condition that they are attended by female staff. This is a big development and a sign the community is becoming more open and readily accepting the conventional services delivery especially maternal services.

Decision making process is a key component in accessing quality and timely health care. Many researchers claim that women in Africa are deprived the power to make decision in many aspects that have a profound effect on their life (Awoyemi et al 2011**,** Lawson et al, 2003). Most of the problem that befell the women; lack of education, economic empowerment, marginalization etc are associated with lack of decision making processes among women leading to lack of freedom that affects their daily life. Previous studies indicated that the individual woman within the Somali community has little role on where she will deliver (Maalim, 2006, Bousery et al 2009, Ganga-Limando et al 2006). This study reveals a remarkable shift in regarding to who decides on where the pregnant woman should deliver. Close to 97% of the participants indicated that the decision is by self (54.4%) or husband (42.4%). (OR=4.40; 95% CI: 1.34 – 14.43; p=0.015 and OR=7.50; 95% CI: 2.14 – 26.24; p=0.002). However, the association was insignificant when backward regression was done during multi-variable analysis. Even then, during the qualitative interviews, the participants came out very strongly that they collectively make decision with consultation of their spouse, indicating that other relatives have minimal role.

6.1.3 Health Facility factors

As distance can be a hindrance or enhancing in accessing and utilizing health services, this study tried to determine the effect of distance in utilizing hospital delivery in PGH. While It indicates that majority of the participants reside less than 4 kilometers from Garissa PGH, they have shown a strong willingness to utilize Garissa PGH (91.2%) compared to those residing more than 6 kilometers from Garissa PGH (73.3%), (OR=3.75; 95% CI: 1.52 – 9.25; p=0.004). This is not surprising as it is in line with other researches in other part of Africa as well as Garissa (Awoyemi et al 2011**,** Boursery et al 2009, sheikh, 2009). In fact it shows that a mother residing less than 4 kilometers from Garissa PGH is 4.83 times more likely to utilize delivery services at Garissa PGH compared to one residing more than 6 kilometers (AOR=4.83; 95% CI: 1.65 – 14.17; p=0.004). Though insignificant when subjected to multi-variable analysis, even the

women who mentioned existence of other maternity near their residence still showed willingness to deliver in PGH Garissa (OR=0.18; 95% CI: 0.07 – 0.48; p=0.001). This affirms that PGH still remains a preferred place for delivery among Garissa resides.

Cost is a real deterrent in accessing health service delivery especially among the poor (Awoyemi et al 2011, Witter, 2003). According to Kenya economic survey 2007, 73.9% of Garissa residence live below the poverty line. While PGH is government institution, hence subsidizing the cost, still over a quarter of the participants indicated that hospital charges prevent people to utilize the maternity. This indicates that cost may partly contribute to under utilization of the maternity services as shown in other studies elsewhere (Awoyemi et al, 2011). Unfortunately, only 2.5% of the participants are aware of the waiver systems or other opportunities like the UNICEF funded OBA services that are in place at the hospital. The study reveals that nearly 79% of those who delivered in the hospital are assisted to offset hospital charges by relatives. Combined these with high number who are using hired taxi (54.4%) to access the maternity, it is justifiable to assume that cost related to hospital delivery is considerably high and not affordable to many of the Garissa population. During the FGD sessions, the participants appear to decry the high cost in accessing maternity services including the indirect cost like transport. However, majority of clients agrees that the accrued benefits in quality hospital delivery services outweighs the costs involved.

6.1.4 Health workers' factors

The issues related to health workers that were under investigation were mainly clients' perception on staff attitudes and gender preferences. While majority of the women have positive perception on health staff, some hard unpleasant experiences. Even as the lower level staffs like guards and cleaners were widely mentioned, some of the higher staffs like nurses were equally accused being insensitive and lacking courtesy. This was more prominent during the FGD as many women complained the approaches and responses of some of the staff. It is interesting to learn from the participants that male health workers are said to be more sensitive compare to female staff. Some other studies reported mixed results in regards to health staff attitude as a barrier in utilizing reproductive health services (_Biddlecom et al, 2008, Boursery et al 2009). This is important as more than a third of the participants said that attitude of the health care staff affects their future utilization of maternity services.

On gender preferences and considering the conservativeness of the Somali community coupled with religious beliefs, overwhelmingly majority preferred to be delivered by a female staff. However, further probe reveal that the absence of their preferred gender won't stop them to deliver in the hospital. This is interesting in that while many other studies showed the gender preferences aspect (Boursery et al 2009, Ganga-Limando et al 2006), the second scenario; majority of women will still come for the hospital delivery regardless of staff gender, is a new development and encouraging. However, many of staffs manning the hospital maternity are currently female nurses which resolved the participants concern.

6.2 Conclusions

This study assessed factors associated with utilization of delivery services at PGH Garissa maternity unit. Beside the socio-demographic factors, it investigated women factor, health facility factors as well as health worker factors. Among the social demographic factors, it is only age that is highly associated with utilization of delivery services at PGH Garissa. A mother aged 25 years or less is 2.83 times more likely to utilize delivery services at Garissa PGH compared to one aged more than 25 years.

On the factors related to women/clients, non existence of cultural/religious belief is associated with utilization of hospital delivery at PGH Garissa. A mother without any cultural/religious beliefs that refrains her from going to deliver in a hospital is 9.09 times more likely to utilize delivery services at Garissa PGH compared to one with certain beliefs. It worth to note that very few study participants mentioned existence of cultural or religious belief that stop women in delivery at a hospital. Similarly, previous history in delivering at PGH Garissa is associated with delivering at the hospital again. A mother with history of delivery at Garissa PGH previously is 3.55 times more likely to utilize delivery services at Garissa PGH compared to one without history of delivery at the hospital. However, One intriguing conclusion is that there is no association between using ANC services at PGH and delivering in the same hospital.

Among the health facilities factors, its only distance that is associated with utilization of PGH maternity unit**.** A mother residing less than 4 kilometers from Garissa PGH is 4.83 times more likely to utilize delivery services at Garissa PGH compared to one residing more than 6 kilometers. Though cost is not statistically associated with delivery at PGH Garissa, participants

decried the cost involved in accessing maternity services at the hospital - both direct and indirect cost

This study didn't reveal any association between health workers' factors and utilization of hospital delivery at PGH Garissa. However, there are major complaints that were raised by clients about the attitude of the health workers. This dissatisfaction couple with the lack of quality health education at ANC may explain why the high antenatal coverage is not proportionate to hospital deliveries. In fact the participants generally seem to suggest that they have no alternative to turn to as the hospital is unique in its services.

This study targeted only women who are accessing the maternal and child health services at PGH Garissa and therefore the perception of other women/clients outside the hospital was not investigated.

6.3 Recommendations

The study makes the following recommendations both as short term and long term interventions;

- As the older women/clients are found less in utilizing the PGH maternity services compare to the younger ones, it's imperative that they should be given special focus especially at ANC level.

- There is an opportunity to mitigate further the effect of cultural/religious beliefs through use of community elders/religious leaders as the number of clients holding these views are few and these seems not strong among the residence

- The hospital administration should ensure the staff are responsive to the need of the clients. Special attention need to be given to the lower staff (guards and cleaners). This is to ride on the popularity of the hospital by retaining the clients who are already accessing while attracting others.

- The quality of health education provided at ANC should be assessed with a view to bridge the gap between service utilization at ANC and Maternity unit. A deliberate focus should be made to reduce misconceptions surrounding the hospital like 'unnecessary' cesarean

operations and detention for failure to pay fees. Currently maternity fees are abolished and this should be made clear to the clients.

- Further research is recommended on;
  - The perception of women/clients who are not accessing the hospital, more so those using other maternities including private nursing homes
  - The quality/effect of health education at the ANC in relation to hospital delivery

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ANNEXES

Annex 1.1 Informed Consent Form- English

Am student of Master in Public Health from university of Nairobi, college of health science, school of public health. I also work with Ministry of Public Health and Sanitation based in North Eastern province. Am conducting research on **factors affecting utilization of hospital deliveries at Garissa Provincial General Hospital.**

To conduct this research, I require information from women who are attending this clinic in this hospital and also women who recently delivered at provincial general hospital, Garissa. As one of these women, I would like to carry out an interview with you. I will record your answers in a questionnaire which will allow me to analyze the answers later on. I assured you that the information you provide will remain confidential and will not be used for any other purpose other than to address the objective of my study which is to assess the ***factors that affects the perception of women in delivering at PGH Garissa***. Though it may not have a direct benefit to you, the findings of this research may enable the Ministry of Health and other health stakeholders to provide better health care services for the population of NEP and others in the country and therefore improve service delivery.

1 would appreciate if you could spare approximately 30 minutes of your time for an interview. No samples or other tests will be done and there is no any risk anticipated in participating. If you agree to participate in the interview, you have the right to withdraw from it at any time. There will be no negative consequences and you will not be denied any services if you choose not to participate in study.

If you are willing to participate in this interview, confirm that you have received this information and that you understood by signing below. If you want further clarification/information please contact the principal research: **Siyat M. Gure, Tel 0721298302, email siyatgure@yahoo.co.uk** . If you agree that we proceed with the interview please sign here

---

Annex 1.2 Inform consent form -Somali

Foomka ogolaansha weeydiisashada sualaha cilmi baarista

Waxaan ahay arday waax kabarda jaamacada Nairobi kunaa taqsuusayo caafimaadka bulshaada. Sidoo kala, waxaan ushaqeeya wasaarada caafimaadka, gaabolka waaqoybaar. Waaxan sameeynaya cilmi baaris kusabsan ***ariimahaa raadka kuuleh mabaadii'da haweeyka ay kaqaabaan kuu daalistaa isbatalka guud ay Garissa*.**

Si aan u sameeyo cilmi baarsitani haddaba waxa aan ubaahnayahay in macluumaad aan ka helno haweeynka istiicmaadha clinika iyo kuwaa waakti doow kuudhaley isbaataalka guud ee Garissa. waxaana jaclaan lahaa in aan wareeysi idin ka qaadno. suaalo qoraal ah ayaa la idin ka qori doona, kaadibna jawaabhaasi oo aan lafi guri doono. Waxaana idiin balanqaaeeynaa in aan ilalalin doona kasloonida macluumaadka aad na siisaan oo aanan u siticmaali doonin wax kale oo aan aheeyn ujoodhaadhi kusaabsan cilmi baaristayta.

Maxsuulka ama natiijada cilmi baaristani waxa lagaa yabaa inn eey u suurtagalin doontaa wasaarada caafimaadka iyo haayadhaha kala ee kaalashaqeyo caafimadka sidii ay adeeg daryeel caafimad oo wanagsan ay u siin laheeyd dadyowga gobalka waqooyi bari iyo intii laahalmaasha ee kunool waadanka Kenya. Daaneh waxay faaidho unoqonkarta daman bulshada.

Waan kuugu mahadcelin lahaa haddii aad 30 daqiiqo oo waqtigaada kamid ah aad iigu hurto si aan wareeysigasi kuula yeelano. Ma jiri doonta wax saambalo ama tijaaba ka qaadis ah.

Haadii aad aqbasho ka qeeybqaadashada wareeysigani, waqtigaad rabta ayaad haddana isaga bixi kartaa . Ma jiri doonta wax cawaaqib xumo ah oo ka soo gaari doonta ama adeeg laguu diidi hadii aaad wareeysiga ka qeeybqaadan weeyso.

Fadlan haddii aad dooneeysa in aad ka qeeybqaadata wareeysigani ee xaqiiji in aaad heshay macluumaadkaan ood fahantsantahay diyaarna u tahay in aad wareeysiga ka qeybqaadato. Hadad toneysa faafahin deraad ah ama suala kale, laxarir cilmi baraha sarre: **Siyat M. Gure, telefoongisa: 0721298302, email siyatgure@yahoo.co.uk**

Hadad ogolati iin an gudagalno war qadashada, fadlan saxiix halgan ----------

Serial N^{o}:

Annex.1.3. Questionnaire – individual

FACTORS AFFECTING UTILIZATION OF HOSPITAL DELIVERIES AT GARISSA PROVINCIAL GENERAL HOSPITAL

QUESTIONNAIRE *[Please complete this questionnaire in pencil]*

Name of interviewer: _____ Facility name: _____

Date of interview: ____/____/____ Started time: _____ finished time: _____

Socio-demographic characteristics of Respondent

1. Where are you currently residing? (*Specify*) District:____ Division:____ Sub-location Village:____	2. What is your age? 1 = less than 20 years 2 = 20 – 25 3 = 26 – 30 4 = 31 – 35 5 = above 35 years	3. What is your religious affiliation ? 1 = Muslim 2 = Christian 3 = Other *(Specify)* _____ _____	4. What is your marital status? 1 = Single 2 = Married 3 = Divorced/Separated 4 = Widow 5 = Other *(Specify*	5. What is your highest level of secular education attended? 1 = None 2 = incomplete Primary 3 = completed primary 4 = Secondary 5 = College (middle level) 6 = University 7 = Other *(Specify)*

6.What is your highest level of religious education attended 1 = Dugsi completed Quran 2 = Dugsi incomplete Quran 3 = madrasa primary 4 = madrasa secondary and above 5 = others (specify_____	7. What are your main occupations? *(Allow multiple answers)* ☐ 1 = Housewife ☐ 2 = employee ☐ 3= Business ☐ 5 = Other *(Specify)* _____	8.What is the main reason for coming to the hospital 1 = ANC 2 = immunization/ weighing 3 = FP 4 = treatment 5 = PMTCT 6=delivery 7 = others (specify) _____	9. If pregnant, how many weeks pregnancy 1= less than 16 weeks 2= 16 wks – 24 weeks 3 = 25 wks – 32 weeks 4 = over 32 weeks	10. What is your parity 1 = 0 2 = 1-2 3 = 3-4 4 = more than 5

A. Women factors

11. Have you delivered at Garissa Provincial General Hospital (GPGH) before?

1 = Yes

2 = No

☐

If no go to question 16

12. If yes, when was it?

1 = Less than a year ago 2 = 1 – 2 years ago 3 = 2-3 years ago

2 4 = 3-4 years ago 5 = more than 5 years ago

13. How were the services?

1=Excellent 2 = very good 3 = good 4 = poor 5= very poor

14. If answer is poor or very poor, why_____

15. Will you advice someone to deliver at PGH Garissa?

1 = Yes ☐

2 = No

15. Why _____

16. Where would you prefer to deliver in this pregnancy or if you could be pregnant?

1= home 2 = Garissa PGH, 3= other GOK hospitals 4 = private hospitals

5 = others (specify)_____

17. If home, whom do you prefer to deliver you?

1= TBA 2 = relatives 3 = self 4 = Health workers 5 = others (specify)_____

18. Why do you prefer that person _____

19. Is there any belief (s) that refrain you to deliver in a hospital?

1= yes ☐

2 = no

20. If yes which one

1 = Religion 2 = Cultural 3 = others (specify)_____

21. Who decides where you will deliver when pregnant

1 = self 2 = your husband 3 = your mother 4 = your father

5= your mother–in–law 6= TBA 7 =others (specify) _____

B. Health facility factors

1) Distance

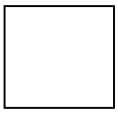
22. How far do you travel to reach Garissa PGH maternity ward?

1= Less than 1 km 2 = 1-3 km 3 = 4-6 km 4 = more than 6 km

23. Do you think that distance to reach PGH maternity is a problem?

1= yes

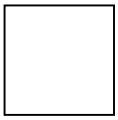
2 = no



24. Are there other maternity services near your residence?

1= Yes

2= No

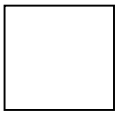


If No, go to question 27

25. Would you deliver in the above mentioned maternity?

1= Yes

2= No



26. If No, why _____

2) Cost

27. In case you delivered in hospital, what means of transport do you use to come to the maternity?

1= walking 2= family car 3= taxi 4 = ambulance 5 = public transport

6= others (specify) _____

28. How much do you pay to the hospital as delivery charges? _____

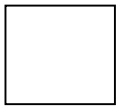
29. Who paid the hospital charges last time you delivered in PGH Garissa?

1= Family 2 = other relatives 3 = well wishers 4 = government/donors
5 = don't know 6 = others (specify) _____

31. Does hospital cost discourage you to deliver at the hospital?

1 = yes

2 = No



3) Quality of services at the hospital

32. What aspect of the PGH maternity service did you like? ***Allow multiple answers***

1= psycho-social support 2= Facility cleanliness 3= staff attitude 4= Time taken to be attended to 5= availability of medical supplies 6 = privacy 7= 0thers (specify) _____

33. What aspects of PGH maternity service do you dislike? ***Allow multiple answers***

1= no psycho-social support 2= facility unclean 3= poor staff attitude 4= long time taken to be attended to 5= Lack of medical supplies 6 = no privacy 7= 0thers (specify) _____

C) Health staffs factors

34. Do you have any preferences on staff gender to deliver you at the hospital?

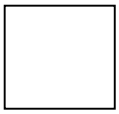
1= yes

2 = No

35. If yes who do you prefer?

1= male

2 = female

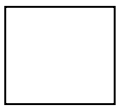


36. Why do you prefer that gender?

37. Does the lack of your preferred gender stop you to deliver in the hospital?

1= yes

2 = No



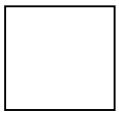
38. How do you rate general staff attitude during delivery at PGH maternity?

1= Excellent 2= very good 3 = good 4 = poor 5 = very poor

39. Does this affect you in your future utilization of the maternity service in the hospital?

1= yes

2 = No



40. If No, why? _____

41. In a scale of 5, where 1 is lowest rate and 5 the highest, how do you rate the general services delivery in PGH maternity

1	2	3	4	5

44. Any general comments on how to improve maternity service in Garissa PGH_____

Annex1.4 Questionnaire Guide For Focus Group Discussions

Site _____ date_____ Interviewers_____

1. Demographic data

S/no	Age	Occupation	Residence
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
12			
13			

WOMEN'S FACTORS

Where will you think most women will prefer to deliver?

Why do you think prefer to deliver in the mentioned area?.....

In your opinion which one is better, to deliver in hospital or home?.....

Why do you say so? …….

What are your opinions in using maternity services at Garissa PGH?.....

Is there any belief, culture or religion that stops you not to deliver in a hospital? If yes which one? ……

In your experience, who decide where pregnant women will deliver and why?

Health facility factors

In your views, is distance within Garissa Township a problem in accessing maternity services?

In your opinions, do you think delivery cost will stop women to deliver in hospital?

What are your experiences/opinions in relation to maternity services provided by PGH Garissa maternity during delivery?

What aspect in terms of services provided by PGH Garissa maternity **did you like** during delivery?

What aspect in terms of services provided by PGH Garissa maternity **did you dislike** during delivery?

According to you, will you advice someone else to deliver at Garissa Provincial General Hospital (PGH) and why?

HEALTH WORKERS FATORS

Who do you think women prefer to deliver in a Hospital during delivery and why?

Does lack of the preferred gender stop women to deliver in a hospital?

In your experience, what are the altitudes of health workers in handling women during delivery at PGH?

Will women's' previous negative experience affect their future utilization of the maternity service at PGH? Why?

What are your suggestions in improving maternity services at Garissa PGH?

Thanks for your participation

Annex 1.5.Dummy Tables

Table 1: Social Demographic characteristics

VARIABLES	**TOTAL SAMPLE (N =) NO. (%)**	**VARIABLE**	**TOTAL SAMPLE (N =) NO. (%)**
Age		How many weeks pregnancy	
Below 20 years		less than 16 weeks	
20 – 30 years		16 – 24 weeks	
30 – 40 years		24 – 32 weeks	
above 40 years		Over 32 weeks	
Religious affiliation		Parity	
Muslim		0-1	
Christian		2- 3	
None		4-5	
Others		More than 5	
Marital status		Education	
Single		None	
Married		Incomplete primary	
Divorced/seperated		complete primary	

Widow		secondary	
Others		Mid level college	
Occupation		University	
None		Others	
House wife		Religious education	
Employee		Dugsi complete Quran	
Business		Dugsi incomplete Quran madrasa primary	
Others		madrasa secondary and above	
Reason for coming		others	
ANC			
Immunization			
FP			
Treatment			
PMTCT			
Delivery			
Others			

TABLE 2: MATERNAL FACTORS

VARIABLE	TOTAL SAMPLE (N =) NO. (%)	VARIABLE	TOTAL SAMPLE (N =) NO. (%)
Previous delivery of PGH Garisaa		Will advice someone to deliver at PGH	
Yes		Yes	
No		No	
When delivered at PGH Garisaa		Belief refrain you to deliver at Hospital	
1-2 years ago		Yes	
2-3 years ago		No	
3 – 4 years ago		Which one	
more than 5 years ago		Religion	
How were the PGH services		Culture	
Excellent		Others	
very good		Who decide where you will deliver	
Good		you	
Poor		husband	

very poor		Your mother	
Where you prefer to deliver		Your father	
Home		Mother in law	
Garissa PGH,		TBA	
other GOK hospitals		Others	
private hospitals		Where will you advice someone to deliver	
Who do you prefer to deliver you		PGH Garissa	
TBA		Private nursing home	
Relatives		Other GOK facilities	
Self		Home	
Health workers		Others	
Others			

Table 3: HEALTH FACITY FACTORS

VARIABLE	**TOTAL SAMPLE (N =) NO. (%)**	**VARIABLE**	**TOTAL SAMPLE (N =) NO. (%)**

How far do you travel to reach Garissa PGH maternity ward		Does hospital cost prevent you not to deliver at the hospital	
Less than 1KM		**Yes**	
1-3 KM		no	
3-5Km		What aspect of the PGH maternity service did you like?	
More than 5		social support	
Is there another maternity ward near you		Facility cleanliness	
Yes		staff attitude	
No		Time taken to be attended to	
Would you deliver in the nearest maternity?		availability of medical supplies	
Yes		privacy	
No		0thers	
Do you think that distance to reach the nearest maternity is a problem?		What aspects of PGH maternity service do not make you happy?	
Yes		no social support	
No		facility cleanliness	

Means of transport		staff attitude	
walking		time taken to be attended to	
family car		availability of medical supplies	
Taxi		privacy	
Others		Others	
Who paid the hospital charges last time you delivered in PGH Garissa?			
Family			
other relatives			
well wishers			
government/donors			
don’t know			
Others			

TABLE 4: HEALTH WORKERS FACTORS

VARIABLE	**TOTAL SAMPLE (N =) NO. (%)**	**VARIABLE**	**TOTAL SAMPLE (N =) NO. (%)**
Do you have any preferences on staff gender to deliver you at the hospital?		How do you assess general staff attitude during delivery at PGH maternity?	
Yes		Excellent	
No		very good	
If yes who?		good	
Male		poor	
Female		very poor	
Does the lack of your preferred gender stops you not to deliver in the hospital?		Does this affect you in your future utilization of the maternity service in the hospital?	
Yes		Yes	
No		No	