DETERMINANTS FOR UTILIZATION OF FAMILY PLANNING SERVICES AMONG WOMEN POST OBSTETRIC FISTULA REPAIR IN KENYATTA NATIONAL HOSPITAL, KENYA

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Determinants for Utilization of Family Planning Services among Women Post Obstetric Fistula Repair in Kenyatta National Hospital, Kenya

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A Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Science in Nursing (Reproductive Health) of the Jomo Kenyatta University of Agriculture and Technology

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DECLARATION

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

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

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DEDICATION

This research project is dedicated to women who suffer female genital fistula, to all women, my mum Mary Oguttu included and to my son Allan J. Ochieng'.

To the fistula nurses and surgeons.

ACKNOWLEDGEMENTS

This research project has been made possible by a number of people to whom I am very grateful.

Special thanks to my supervisors Dr. Drusilla Makworo and Dr. Kyalo Mutisya for their continuous guidance, advise and invaluable help throughout the study.

Special thanks to my Son, Allan J Ochieng' and my entire family for prayers and support.

Special thanks to my colleagues and friends who encouraged and assisted me in one way or another.

My utmost gratitude goes to the almighty God who enabled me complete this project.

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ABBREVIATIONS/ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate
FP	Family Planning
HIV	Human Immunodeficiency Virus
IUCD	Intrauterine Contraceptive Device
KDHS	Kenya Demographic Health Survey
KHN	Kenyatta National Hospital
кі	Key Informant
KNBS	Kenya National Bureau of Statistics
LAM	Lactation Amenorrhea Method
МоН	Ministry of Health
OF	Obstetric Fistula
RVF	Rectovaginal Fistula
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections

UHC	Universal Health Coverage
UNFPA	United Nations Population Funds
USAID	United State Agency of International Development
VVF	Vesicovaginal Fistula
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

Barriers	These are the factors that hinder utilization of family planning services.
Facilitators	These are the factors that enhance utilization of family planning services.
Family Planning	An essential component of reproductive health care services provided immediately after delivery and during the postpartum period to help individual (woman or man) and couples to use various types of fertility control that will help them have children when, how many and at what time.
Obstetric Fistula	Abnormal hole/connection in a womans's genital tract
Recto-Vaginal Fistula (RVF) Utilization	An abnormal connection between the rectum and the vagina; a stool fistula. Is the use or uptake of family planning
Vesico-Vaginal Fistula (VVF)	An abnormal connection between the bladder and the vagina; a urine fistula.
Women After Obstetric Fistula Repair	Women who have undergone surgical procedure to repair the fistula

ABSTRACT

Obstetric fistula is an indicator of failure of proper management of obstructed labour. It mirrors the failure of healthcare systems in provision of accessible, timely and appropriate emergency obstetric care. Although often neglected, obstetric fistula (OF) is a significant health problem with a devastating physical, emotional and social consequences among women worldwide. Obstetric Fistula can be corrected through surgical repair. Unfortunately, it can recur in a woman whose fistula has been successfully repaired surgically but received little or no follow-up. Due to lack of family planning support, the woman can become pregnant again before proper healing takes place. The study aimed at assessing the determinants of utilization of family planning services among women post obstetric fistula repair in KNH. This study adopted a cross-sectional study design. Study participants who met the inclusion criteria were recruited as they came to seek routine clinical care services in the hospital (clinic 66). Pre-testing was done in ward 1B where all OF patients going for surgery are admitted and nursed. Permission to undertake this study was obtained from Kenyatta National Hospital/ University of Nairobi Ethics and Review Committee and Hospital Administration upon approval granted by graduate school, JKUAT. A structured questionnaire was used to collect data from the OF clients while an interview schedule was used to collect data from key informants who were nurses. Analysis of data was done by verification and coding into an electronic system and use of Statistical Package for Social Sciences (SPSS) done. Descriptive statistics were used to summarize the characteristics of the participants by presenting categorical variables as percentages and continuous data as means or medians. Utilization of family planning was then presented as a proportion. Factors associated with FP use were determined using chi-square test. A p-value of < 0.05 was used to assess statistical significance. The study found that utilization of family planning services was very low in women after repair of obstetric fistula with only a quarter (25%) using contraceptive methods. The study further found a significant relationship between previous use of FP methods and utilization of FP services after repair of obstetric fistula. The chi-square test results revealed that the outcome of the last delivery had significant influence on the time of commencement of family planning ($\chi^2=5.429$, p=0.020) and that there was significant influence of time plan to get pregnant in the future and commencement of family planning $(\chi^2 = 8.722, p = 0.033)$. The results also revealed a significant relationship between affordability and accessibility of the FP methods with utilization post repair of OF $(\chi^2=4.000, p=0.046)$. Following the themes from the qualitative arm of the study, the study further revealed that there was need for integrating family planning services with OF services to ensure reduction of turn around time. The study concluded that though there are a high level of awareness of family planning methods there seems to be several barriers that hinder women from taking up the methods. The study recommended that there is need to give all relevant family planning information to the clients before discharge to allow them to have an informed decision regarding delaying pregnancy to allow enough time for complete healing. The government should avail all methods of FP to all government facilities to improve on accessibility. There's further need for NHIF to include Family Planning methods in their schedule to improve affordability.

CHAPTER ONE

INTRODUCTION

1.1 Background information

Obstetric fistula (OF) is an abnormal opening between a woman's genital tract and her urinary tract (vesicovaginal fistula-VVF) or genital tract and rectum (rectovaginal fistula-RVF) where urine and feces leak continuously respectively (WHO, 2018). Obstetric Fistula often results from childbirth complications, mainly, prolonged obstructed labour as well as lack of access to maternity services (Adler *et al.*, 2013). In East Africa alone, between 3,000 and 5,000 develop fistula while giving birth every year (UNFPA,2019).

Globally, it is estimated that more than 2 million young women live with untreated obstetric fistula. This number could be more since most of this data are captured at the health facility levels which are not reached by many women who suffer in isolation (United Nation Population Fund, 2014).

In Kenya, an estimated 2,000-3,000 cases of OF occur each year with an incidence of 1 per 1000 women. There could be probability that these figures are underestimated since these women could be suffering in silence and isolation due to fear and stigmatization which is unknown to the healthcare system (Bellows *et al.*, 2015).

Although often neglected, Obstetric Fistula (OF) is a significant health problem with a devastating physical, emotional and social consequences among women worldwide. Obstetric Fistula has devastating consequences on a woman and her child since women who develop fistula have greater risk of stillbirths compared to those who have normal delivery. Moreover, women with fistula are not only left with leakages to be concerned of which often results into unpleasant odours that makes them experience stigma or ostracism, but they may also experience neurological disorders, bladder infections, orthopedics injury, painful sores, infertility and kidney failures. Some women are abandoned by their husbands and families due to fistula. This worsens their poverty

because of lack of support as well as finding it, it gets difficult to secure an income. Being isolated can also affect these women mentally resulting into low self-esteem, depression and eventually suicide (UNFPA, 2014). Obstetric Fistula can easily recur in a woman whose fistula was successfully repaired surgically but received little or no follow-up. Studies have shown that a woman requires at least two years post repair before conceiving but due to lack of family planning support, the woman can become pregnant again before proper healing takes place. (Umeora & Emma-Echiegu, 2015).

Use of Family Planning (FP) methods among women who have undergone successful fistula repair is of great importance both physically, economically and socially as it allows the prevention of recurrence and breakdown of fistula. It helps women to rebuild their livelihood and re-integration into the family and community (United States Agency for International Development, 2015). For this reason, women are advised post fistula repair to refrain from sexual activities for about 3-6 months to allow healing. Thus, the use of family planning services allows them to resume sexual activity after the abstinence period without fear of conceiving before being completely healed (Alayande (a) *et al.*, 2017).

Although there is high awareness of various family planning methods among women worldwide, few are utilizing the FP methods after the repair. Hence, high unmet need for family planning services among these women across the globe. In Sub-Saharan Africa where Kenya is not an exemption, factors identified to hinder the utilization of family planning methods include poor livelihood, weak health facilities and inadequately trained health providers, lack of spousal support, culture and religion restrictions, lack of access to sexual and reproductive health information, fear of side effects, myths and misconceptions, unfavorable perceptions (Apanga et al., 2015).

1.2 Problem statement

Although the occurrence of Obstetric fistula has been eradicated or minimized in developed counties, it is still being experienced by women in middle- and low-income countries in Sub-Saharan Africa and South Asia (United Nation Population Fund, 2014).

Globally, it is estimated that more thatn 2 million young women live with untreated obstetric fistula(UNFPA,2014). This can be attributed to the fact that obstetric fistula often affects the most marginalized, poor, vulnerable and illiterate women and girls who have little or no access to obstetric care services (UNFPA, 2014). In Kenya, an estimated 2,000-3,000cases of OF occur each yeay (Bellows et,al., 2015).

The occurrence of OF continues to contribute to maternal morbidity in Kenya with immense physical, psychological and socioeconomic suffering among women (Khisa, 2015). Although OF is a social and health problem in Kenya, it is preventable and treatable through corrective surgery. A lot of information available has focused on the magnitude of the problem, the underlying causes, treatment and consequences (Khisa, 2015).

Nairobi county has the highest number of women (70%) with awareness of Fistula with slightly higher level of women (20%) who reported to have experienced fistula (KNBS, 2014). However, the prevention mechanism of the occurrence and reoccurrence of OF has remained relatively overlooked in Kenya (Khisa,2015). This neglect is evidenced by scarcity of information on the prevention strategies including access to family planning services especially among women of low socioeconomic means who have little or no access to family planning information and services. It has not been adequately captured in the Kenya Demographic Health Survey (KDHS) which has only captured the level of awareness of fistula among the general population and those who have experienced symptoms indicative of fistula (KNBS & MoH, 2015).

The study will help increase the utilization of family planning services among women post obstetric fistula repair that will go a long way in preventing the recurrence of OF. This will eventually help improve the maternal health by reducing the occurrence of maternal mortality and morbidity.

1.3 Justification

Preventing and ending OF is a critical component in all measures of reducing maternal and neonatal mortality and morbidity which has been noted to occur with the poorest, most vulnerable and marginalized women and girls where their rights and health needs are often inadequately met.

To prevent and end OF, access to family planning services and timely access to safe emergency obstetric and newborn care services under skilled health professional at every birth are vital. Family planning is critical in preventing unwanted or unplanned pregnancy, empowering women on when and the number of children to have as well as child spacing all of which are effective ways of preventing OF. In addition, it helps in reducing maternal and child mortality as well as poverty. The overall well-being of a mother impacts her general health.

Observation made in the fistula clinic shows a total of 43 clients out of 294 total clients seen from the month of Jan-July 2018, had recurrence of fistula post repair (KNH OF data, 2018). However, researchers, program managers and donors are keener on quick results by concentrating on the treatment component, rather than prevention. In fact, prevention component of OF is one of the understudied areas. Hence, the study on the utilization of FP services among women post OF repair was expected to identify gaps in the prevention of OF. This will help increase the utilization of family planning services among women post oF.

Kenyatta National Hospital being a National Referral Hospital with specilized Fistula surgeons and Fistula Nurses, receive patients referred from all over across the country suffering from Obstetric Fistula. It's currently the only public health facility that is offering routine surgical repair of, i.e almost on a weekly basis Therefore this will give a general picture of the status in Kenya since the clients served in the fistula clinic come from all parts of the country having been referred for specialized surgery and care(KNH OF data,2018).

1.4 Research questions

- i. What proportion of women post obstetric fistula repair attending KNH utilize family planning services?
- ii. What are the patient related factors influencing utilization of family planning services among women post obstetric fistula repair at KNH?
- iii. What are the health system related factors that influence utilization of FP services by women post obstetric fistula repair at KNH?

1.5 Objectives

1.5.1 Main Objective of the Study

To identify the determinants of utilization of family planning services among women post obstetric fistula repair in KNH.

1.5.2 Specific objectives

- i. To determine the proportion of women, post OF repair utilizing family planning services at the KNH.
- ii. To determine the patient related factors influencing utilization of family planning among women post OF repair at KNH.
- To establish the health system related factors that influence the utilization of Family Planning services among women post obstetric fistula repair at the Kenyatta National Hospital.

1.6 Significance of the Study

The finding of this study will be utilized by policy makers at both levels of the Government, that is at the National and County Governments to strengthen the existing policies on family planning aimed at enhancing preventions of obstetric fistula. The finding of this study will also be used by programme managers, educators, researchers,

donors and stakeholders both in NGOs, private sector and government institutions in enhancing utilization of family planning services aimed at facilitating prevention of OF as well as empowering women to take charge of their own health.

The findings will as well be useful to the reproductive health department of KNH as well as in improving the quality of life of women having experienced the devastating effects of OF. The findings will also be useful in enriching ongoing research on OF and preventions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Obstetric fistula (OF) is a significant health problem often neglected yet takes a heavy toll on Women especially in Sub-Saharan Africa. Most of these women and young girls suffer in silence due to stigma, shame and isolation because of being abandoned by their husbands, family and the community. Yet OF is a condition that can be prevented as well as treated surgically (Banke-Thomas *et al.*, 2014). World Health Organization (WHO) has defined OF as an abnormal opening between a woman's vagina and bladder (vesicovaginal fistula, VVF), between the rectum and the vagina (rectovaginal fistula, RVF) or both through which her urine and or faeces continually leaks (World Health Organization, 2015).

OF is often as a result of one of the direct causes of maternal mortally, prolonged obstructed labour due to lack of timely medical intervention. The sustained pressure applied by the fetus' head on the mother's pelvic bone results to compressed tissues between the fetal head and posterior aspect of the symphysis pubis when the fetal head is blocked. This results to ischemic necrosis of the soft tissues due to insufficient blood supply causing sloughing off, of the dead tissue. Eventually, a hole forms (fistula) between the vagina and the urinary bladder, causing VVF and/ or the rectum, causing RVF (Lufumpa *et al.*, 2018).

OF predisposes women to constant embarrassment by their inability to control the bodily functions that render them constantly wet and soiled with accompanying smell. This leads to physical, emotional, social and economic consequences in the lives of these women (Roka *et al.*, 2013). Physically, these women may experience neurological disorders resulting to foot drops bladder infections, orthopedics injury, painful sores and kidney failures. Moreover, in almost every occurrence of OF, the baby is stillborn. The stigma

and isolation that comes with OF may subject the woman to significant emotional damage which leads to depression and/or eventually suicide. The social consequences of OF includes separation, abandonment and ostracism of these women by their husbands, families and community. OF also leaves women and young girls with little opportunity to hive a living which worsen their poverty (Bellows *et al.*, 2015). All these included, has made it difficult to determine the prevalence of OF as women keep to themselves without speaking out.

Globally, the WHO estimates that more than two million girls and women are living with OF, with an additional 50,000- 100,000 incidences of OF occurring yearly with the vast majority of whom are occurring in South Asia and Sub-Saharan Africa with a prevalence of 1.2 per 1000 women of reproductive age in South Asia and 1.6 per 1000 women of reproductive age in South Asia and 1.6 per 1000 women of reproductive age in Sub-Saharan Africa (Rochat, 2015).

According to the United Nation Population Fund (UNFPA), in Sub-Saharan Africa alone, between 3,000 and 130,000 develop fistula while giving birth every year. However, the number could be more since estimating the actual incidences and prevalence rate is difficult bearing in mind that most of the OF cases occurs in remote geographical areas where women with the condition are ostracized (Tuncalp *et al.*, 2015; Adler *et al.*, 2013).

In Kenya, it is estimated that 3,000 cases of OF occurs each year with an incidence of 1/1000 women. There could be probability that these figures are underestimated since these women could be suffering in silence and isolation due to fear and stigmatization which is unknown to the healthcare system (Roka *et al.*, 2013).

Family Planning services are defined as educational, comprehensive medical or social activities which enable individuals, to determine freely the number and spacing of their children and to select the means by which this may be achivened. Among 1.9 billion women of reproductive age (15-49 years) worldwide in 2019, 1.1 billion have a need for family planning, of these, 842million are using contraceptive methods, and 270 million

have unmet need for contraception. Use of contraception advances the human right of people to determine the number and spacing of their children.(United Nation, 2019).

Though not the primary goal of fistula repair, for many women, a return of reproductive capacity is essential to successful reintegration into their communities after surgery. Nearly half of women desired future pregnancies, but many were uncertain about their ability to bear children and feared additional pregnancies could cause fistula recurrence. (Study done by Laura et al, 2015 in Malawi). Because several women were unsure about their reproductive health and fertility, counseling and educating women about these issues prior to discharge after fistula repair and again at their follow-up visits was found to be important. Furthermore, few women were found to be using contraceptives despite knowing the risks associated with additional pregnancies after fistula repair, including reopening of the repaired fistula. A challenging part of the discharge process usually includes discouraging women from sexual activities for six months after fistula repair, so that the vaginal tissue has ample time to properly heal. To promote optimal healing and prevent fistula recurrence, women are typically counseled to wait at least 12 months after fistula repair to conceive and hence the two years wait before subsequent delivery with a scheduled cesarean delivery for all future pregnancies (Kopp et al, 2014). But because women are discouraged from sexual activities for six months, they may be less likely to inquire about contraceptive options and availability. This could lead to unintended pregnancies among women who have previously undergone fistula repair. Therefore, a more comprehensive discharge process that includes contraceptive education and a discussion of future fertility goals (if applicable) would be beneficial for women at fistula repair centers.

Family planning is a crucial strategy for preventing fistula. It has been estimated that about one-third of all childbirth-related deaths and injuries, included, could be avoided if women and young girls had access to family planning services. Following surgical repair, it helps to protect a repaired fistula recurrence by delaying pregnancy. This guarantees them the opportunity to plan when and how to have children as it increases a woman's fertility awareness. Moreover, child spacing also gives women humble opportunity to rest between one pregnancy to another and this gives them the opportunity to exclusively breastfeed which is important both to the health of the mother and that of the child. Although couples are always advised to refrain from sexual activities for a period not exceeding six months following surgical treatment, they always find it difficult to comply with this advice. Hence, even if couples resume sexual activity earlier than recommended, FP enables women recover well from their traumatic physical and psychological experiences without additional worries of getting pregnant again before they are ready. In addition, FP also has the ability to empowering women, reducing poverty, enhancing education, reducing adolescents pregnancies and slowing the populations growth (Okeke, 2018; Alayande *et al.*, 2017).

2.2 Level of utilization of family planning services among women post fistula repair

Globally, the level of awareness on FP methods among women with OF is high but only a handful of them that utilize any modern methods of FP after surgical repair. For example, a study in Nigeria reported that majority of women (95.7%) were aware of modern FP methods but only 37.2% ended up utilizing FP after undergoing OF repair surgically with the most commonly used methods70% being the male condom while the use of Depo-Provera accounted for only 20%. Some of the reason given for low utilization after OF repair ranges from low level of education, myths and misconception, religious and cultural beliefs as well as desire for more children having lost a baby prior to development of OF(Alayande *et al.*, 2017; Lawani *et al.*, 2015).

Uchendu, Adeoti, Adeyera and Olabumuyi (2019) conducted a study on after obstetric fistula repair; willingness of women in Northern Nigeria to use family planning. The study sought to assess the willingness to use family planning among 420 women receiving care at obstetric fistula centres in three northern Nigerian States using a semi-structured questionnaire. The study found that 56.7% were aware of family planning methods, only three (1.3%) had ever utilised any method and 63.8% were willing to use a family planning method in the near future. The study further established that age, type of marriage and the presence of surviving children were the significant predictors of willingness to use family

planning among women with fistula. The study concluded that there was a moderate awareness of family planning with very low utilisation rates; however, a high proportion of these women were willing to use FP. The researcher recommended that there was need for integration of FP services with OF services.

In Ghana, Apanga and Adam (2015) by employing a descriptive cross-sectional study evaluated factors influencing the uptake of family planning services in the Talensi District. The study found that 89% of respondents were aware of family planning services, 18% of respondents had used family planning services in the past. The study also established that parity and educational level of respondents were positively associated with usage of family planning services. Aditionally, major motivating factors to the usage of family planning service were to space children, 94% and to prevent pregnancy and sexual transmitted infections 84%. According to the findings, major reasons for not accessing family planning services were opposition from husbands, 90% and misconceptions about family planning services in the Talensi district, the uptake level of the service was low. Thus, the study suggested that there was the need for the office of the district health directorate to intensify health education on the benefits of family planning with male involvement. The government should also scale up family planning services in the district to make it more accessible.

In Ethiopia, Dasa, Kassie, Roba, Wakwoya and Kelel (2019) examined the factors associated with long-acting family planning service utilization by conducting a systematic review and meta-analysis. The participants of the study were married women of reproductive age in Ethiopia. This search included all published and unpublished observational studies written in the English language conducted before April 30, 2018, in Ethiopia. The study found that Women's inadequate knowledge level, women's age between 15 and 34, not having electronic media and women from rural area were less likely associated in the use of long-acting family planning services. The study also found that the odds of utilizing long acting family planning methods were high among non-government- employed women and those having discussed with their husbands. It was

however established that having no previous exposure to any modern family planning method and women having no discussion with husband were more likely associated in the utilization of long-acting family planning services.

According to the Kenya Demographic Health Survey (KDHS) 2014, women of reproductive age (15 to 49 years) who are using any method FP services accounts for 58% where unmet need for FP services stands at 18% (KNBS, 2014). Modern methods of family planning are the most commonly used accounting for 53% and they include IUCD, implants, injectables (Depo-Provera), pills, male and female condoms, female and male sterilization and lactation amenorrhea method (LAM). The most used modern methods include injectables at 26%, followed by implants (10%) and then pills accounting at 8%. The survey also revealed that the prevalence of family planning increased with the age as those aged 30 years and above use different methods of family planning compared to those aged 19 years and below. Also married women tend to access family planning services compared to their unmarried counterparts. Those who dwell in urban setups that use family planning methods account for 62% compared to those who dwell in rural areas accounting for 56%. In addition, contraceptive prevalence rate (CPR) for Nairobi County where the study will take place stands at 62.6% (KNBS & MoH, 2015).

A study conducted by Khisa, Wakasiaka, Kagema and Omoni (2012) to establish the relationship between contraception knowledge and practice among fistula patients at referral centers in Kenya found that 76.2% of patients expressed a willingness to use contraception after fistula repair. In the study a total of 206 patients were interviewed. Most of the patients were young (mean age 22 years). Literacy was low: only 1.7% reported tertiary-level education, and 56.7% reported primary-level education. The study concluded that Among patients presenting with a fistula in Kenya, the unmet need for family planning was high. There is an urgent need for healthcare providers to integrate family planning services in fistula care programs.

2.3 Facilitators to utilization of family planning services among women post obstetric fistula repair

The following have been noted to optimize the utilization of FP services among women; they include knowledge and awareness, previous FP use, benefits of FP and partners' influence

2.3.1 Knowledge and awareness of FP

Level of awareness and sufficient knowledge on family planning services among women post OF repair is critical in enhancing the use. Moreover, It has been observed that the awareness of the availability of FP services and the various uses of FP methods and how they work among women has a great influence on their uptake of the services (Apanga & Adam, 2015). This was seen in a study involving 4 referral hospitals in Kenya where majority of the women post OF repair (76%) indicated their willingness to use FP methods if they are made to know more about FP methods during their post-surgery period.

In India, Quereishi, Mathew and Sinha (2017) assessed the association between Knowledge, attitude and practice of family planning methods among the rural females of Bagbahara block Mahasamund district in Chhattishgarh State. The study was conducted at the Government Medical College Thrissur, Kerala and study period was 1year (2014-2015). The awareness and contraceptive practices of 514 pregnant women who were admitted for delivery were assessed by using questionnaire. The data was entered in MS excel sheet and analysed using SPSS software. The study found that the awareness regarding barrier method of contraception was maximum. (96.7%), followed by permanent methods (96.8%), IUCD (94.9%) and natural methods (92.6%). Around 71.6% of the study population had used some form of contraception. The most commonly contraceptive method was natural methods (69.6%) followed by barrier method (59.9%). IUCD was the method which was least practiced (2.9%) followed by oral contraceptive pills (19.1%).

Similar situations were also seen in Nigeria in a study involving women post OF repair in two States of Kaduna and Sokoto where 70% and 87% of the respondents were aware of the FP while 12.5% and 60% were counseled respectively on FP methods and the importance of child spacing. Though 75% of the post OF respondents in Sokoto OF units thought FP is useful, none of them used any method, while in Kaduna 70% of the respondents liked FP and 60% used FP methods with most of them using implants and Depo-Provera (Alayande et al.,2017).

However, a study by Nasir et al., (2017), in Nigeria, showed that awareness of modern family planning methods was poor among women with obstetric fistula where majority (92.5%) had no formal education as only 27.7% were aware. The same study also revealed that the source of information was by the healthcare providers and FP methods that were identified by most of the women (64.6%) was oral contraceptive pills while injectables were known by 58.3% of the women. This demonstrates that knowledge about FP services was low among women with obstetric fistula. Moreover, if obstetric fistula is to be prevented, educative campaigns targeting poor, vulnerable and marginalized women in rural areas where accessibility of health services is inadequate should be intensified.

Eittah and Amer (2019) determined the effectiveness of an educational program in raising women's knowledge and awareness about family planning methods in a rural area in Egypt. The study was conducted at primary health centers in Shebin Elkom district, Menoufia governorate, Egypt by adopting a quasi-experimental research design (one group pre–posttest). The study found that here were highly statistically significant differences in women's knowledge and awareness about family planning methods at the pre–posttest among the studied women. There was a significant correlation and statistically significant difference in the women's total score and their ages. Furthermore, there was a positive correlation between the total knowledge score of the women studied and their educational level. The researcher hence concluded that an educational program significantly improves knowledge and awareness of women about all types of contraceptive methods. It was hence suggested that educational programs should be

provided to all women about the safety and convenience of modern, long-term, reversible methods of contraception.

2.3.2 Accessibility, Availability and Affordability of FP Services

Accessibility, availability and affordability of family planning services are very important in facilitating the utilization of the FP services. How accessible in terms of distance of the health facilities providing family planning services is crucial in enhancing the use of FP methods among women. Short distance involved in accessing the services has been noted to enhance the use of FP services among women as this ensures reduction in the cost of seeking the services through reduced travel cost and time spent in accessing the services. Even if health facilities providing the FP services are accessible, availability of the FP methods is critical to facilitate the use. Ready availability of various FP commodities through continuous supply in the health facilities reduces the need for repeated visits to the health facilities by women who need the FP services. This translates to reduced transport cost and time wastage hence encourages the utilization of the FP services among women. Affordability of FP services which comprise of cost incurred in purchasing the FP services and transport cost while seeking the FP services. In almost all public hospitals in Kenya, FP services are free having been exempted from the user fee (Agesa, 2016).

In Uganda Nuwasiima et al. (2019) evaluated acceptability and utilization of family planning benefits cards by youth in slums in Kampala, Uganda. The study utilized a quantitative cross-sectional design and was part of a baseline household survey while the utilization study was a primary analysis of claims and clinic data. The study found that acceptability of the program was high (93%). Seventy-two percent of females used the card at least once to access reproductive health services. Twenty-seven percent of female users discontinued family planning and 14% changed family planning methods during the study. Female users of short-term contraceptive methods were 11 times more likely to discontinue use of FPBCs compared to those who used long-term methods. The study concluded that Family planning benefits cards, deployed as incentives to increase uptake of family planning, exhibited high acceptability and utilization by youth in urban slums in

Uganda. There was evidence that use of short-term contraception methods, professional employment, and lower parity were associated with discontinuation of modern family planning methods after initial enrolment.

2.3.3 Previous FP Use

Having used family planning services before and seen the benefits among women will make them use FP methods again. A study in Ghana, showed that women who were currently using FP services cited the reason for using is because of having had accessed to the FP services before and having seen the benefits of using FP services (Apanga & Adam, 2015).

Moreover, having a positive perception on the benefits of family planning services among women post OF repair can drive them to use available FP methods. Women's desire to limit the family size, prevent unwanted pregnancy and spacing of births as well as prevention of OF will find family planning services favorable. A situation reported in Nigeria, where 48.9%, 22.9% and 6.3% of participants in a study identified limiting of family size, spacing of births and prevention of OF respectively as the benefits of using family planning methods (Nasir *etal.*, 2017). In addition, Apanga & Adam, (2015), in a study in Ghana, participants cited spacing of children, the need to prevent pregnancy and sexually transmitted infections (STIs) as some of the reasons for using family planning services.

2.3.4 Partner Influence

Partners' support is crucial in promoting utilization of FP services among women. Studies have shown that partners' approval of FP services increases the utilization among women as this liberates them from the burden of decision making within the household. Accessing FP services may be difficult, time-consuming and expensive that even if the health facility was situated near the woman's house, she will not take the advantage of the services if she does not have control over the household resources. Availability of FP services

information, ready transportation and money to facilitate accessibility is important. Participation in FP services counseling by sexual partner and financial support to facilitate accessibility of the services enhance utilization among women (Amo-Adjei *et al.*, 2017). Male partner involvement in family planning decision making also boost the woman's confidence and relieve her of worries that may hinder her from accessing and utilizing FP services.

2.4 Barriers to Utilization of Family Planning Services among Women Post Obstetric Fistula Repair

The major barriers to utilization of family planning services to include low level of education and poverty among women, lack of access to family planning services information, myths and misconceptions, fear of side effects, lack of support by male partner, religious and political authorities, weak heath system and poorly trained health providers (Amo-Adjei *et al.*, 2017).

2.4.1 Low Level of Education

Education plays a significant role in the utilization of family planning services. Use of family planning services increases with the increased level of education among women. Women with better education are more informed on the benefits of family planning services and are more likely to use FP services in comparison to their peers with low education. In addition, more educated women tends to have a desire for few children whom they can adequately provide and attend to compared to their less educated peers who more than not in many circumstances have large family size (Agesa, 2016). A similar situation was observed in a study carried out by Ouma *et al.*, (2016), in Uganda where use of family planning services increased with women level of education; those with advanced level of education (58.3%) and ordinary level of education that were using family planning services. In addition, the same study also revealed that majority of women (89.6%) with

no education and those (35%) with primary education desired more children compared to only 7% with ordinary education who desired more children.

These shows that women with less education tend to have the highest unmet need for family planning services.

Sultan (2018) conducted a study to determine the effects of education, poverty, and resources on family planning in developing countries. The study found that education regarding family planning is essential. Moreover, it is fundamentally important to introduce the concept, knowledge, awareness, practice, and availability of contraceptive measure, and family planning services. However, women in developing countries are struggling with the use of modern contraceptive methods but are lagging far behind due to the scarcity of resources. It is imperative to make contraceptive methods more accessible and available in resource-scarce countries.

2.4.2 Myths and Misconceptions about Family Planning

Women who have myths and misconceptions about family planning methods will end up not using them. Myths are unfounded beliefs which are passed across about family planning methods whereas misconceptions are misinterpretation of facts or ideas. In this case, family planning services. A study by Ochako *et al.*, (2015), in Kenya, revealed that among most of the participants, fear and concerns about family planning was the major barrier to its use where many of their fears were based on myths and misconceptions. Participants cited concerns that most of the family planning methods would render them infertile. These they said prevented them from using any method of family planning.

Some of these misconceptions include "pills are not good even my mum has warned me severally not to use pills because it will come a time in the future when I will need to have children but will not be able to have one". One was "If they (health providers) put that implant on you and removed it, will not be able to become pregnant again". Some say, "if you are used to taking injections (Depo-Provera), might not be able to get pregnant again".
Similar finding was seen in Ghana where participants reported that perceived misconceptions about family planning services made it difficult to utilize it. Some of these misconceptions included; family planning services being harmful to the womb as well as family planning services are only meant for married couples.

Women especially those of post obstetric fistula repair should be encourage not to follow misconception, but to visit a health facility and see a skilled health provider proficient in family planning services to provide them with adequate information on the benefits of family planning services including prevention of the occurrence of obstetric fistula.

2.4.3 Fear of Side Effects

Despite the enormous benefits of FP services, lack of adequate information on the side effects makes many women reluctant to use FP methods. These concerns about the side effects of family planning methods have been shown to impede the use among women as was reported in a study in Nigeria, where 8.3% of the respondents cited fear of the side effects as one of the reasons of not using FP methods (Nasir *et al.*, 2017).

A qualitative study by Ochako *et al.* (2015), in Kenya, found out that the real side effects of family planning methods were barriers to the use of family planning services among the participants. The most side effects mentioned by the participants were changes in weight, excessive bleeding and lack of sexual desire. Headache and increase in blood pressure were also mentioned by a few of the participants. All methods were associated with these side effects. A study by Ouma *et al.*, (2016), in Uganda, also reported that fear of side effects and fear of the cost of managing side effects impede women from accessing family planning services.

Diamond-Smith, Campbell and Madan (2012) by using qualitative interviews with women in three countries, examined what women feared, how they acquired this knowledge, and how it impacted on decision-making. The study aimed to understand whether women would be more likely to use family planning if they were counselled that the side-effects they feared were inaccurate. The study findings revealed that across all countries, respondents had a similar host of fears and misinformation about family planning, which were comprised of a mixture of personal experience and rumour. The study indicated that most fears were method-specific and respondents overwhelmingly stated that they would be more likely to use the family planning method they feared if counselled falsely that there were no side-effects.

2.4.4 Unfavorable Perceptions

Use of family planning services has been associated with promiscuity and straying as was seen in a study in Kenya, where there were beliefs among the participants that the use of family planning among young women encourages them to become promiscuous. There was a strong expression among the participants that partners of young women who uses family planning methods viewed them as unfaithful and often goes astray (Ochako *et al.*, 2015).

A study among women in Ghana revealed that women were reluctant to access FP services since they perceived family planning as meant for married couples and others had concerns that they will become sexually promiscuous if they access family planning services and they cannot give birth (Apanga & Adam, 2015).

2.4.5 Lack of Partners' Support

Husbands' opposition and lack of support for their wives has been found to hinder the utilization of family planning services. This is a major barrier as women cannot make decision on their reproductive health including family planning without the approval of the husband who is considered the head of the family especially in a patriarchal African society. Men are basically considered the prime decision makers in all matters pertaining the household including managing of resources, choice on FP and number of children and women are left with implementations (Agesa, 2016).

Thus husband opposition plays a crucial role in hindering the utilization of FP services as was reported in Ghana where women cited the husband opposition as the major reason of not using family planning services (Apanga & Adam, 2015). A similar finding was seen in Nigeria where partners' disapproval was sighted as one of the reason for non-use of FP services among women post OF repair (Lawani *et al.*, 2015; Alayande *et al.*, 2017). Husbands support is critical for utilization of family planning services and therefore, their opposition makes it difficult for women with post obstetric fistula repair to use family planning services.

Balogun, Adeniran, Fawole, Adesina, Aboyeji and Adeniran (2016) examined the effect of male partner's support on spousal modern contraception in a low resource setting. A prospective cross-sectional survey involving women on modern contraception was conducted at the family planning clinic of the University of Ilorin Teaching Hospital, Nigeria, between December 2013 and April 2014. All consenting participants completed a self-administered questionnaire designed for the study. The study found that most women failed to comply with contraception due to male partner hindrance or inability to pay for contraceptive or transportation to the clinic. The study established that male partners hindered contraception by reporting the woman to relatives/friends or denying her money for feeding allowance.

2.4.6 Culture and Religion Prohibition

Most culture has placed men as the head of the family especially in patriarchal society and women has no say even on their own reproductive health. They cannot make any decision on their own health without involving their husbands. Religious belief has been a real barrier in the utilization of FP services in many parts of Africa. For instance, Catholic, Muslim and some mainstream Protestant churches view sexual activities as solely meant for procreation and use of FP methods goes against this purpose and the will of God (Agesa, 2016). Religion prohibition was seen to be a barrier for the utilization of family planning methods as 20.8% of the respondents in a study carried out in Nigeria reported religious prohibition as the reason for not using FP methods (Nasir *et al.*, 2017). In

addition, Lawani *et al.*, (2015), in Nigeria also made the same observation in a study where cultural beliefs and religious prohibition were seen to hinder the utilization of FP services.

2.4.7 Health System

Despite awareness on the importance and benefits of FP services, accessibility, affordability and availability of the services is paramount for the use of family planning services among women. Participants in a study in Ghana reported that, although they were aware of the benefits of using FP services, they did not get the services easily because they were being provided by health facilities that were situated far from their homes. Some women reported to have stopped using them after experiences they thought to be the side effects of the family planning methods as they were not explained to or counseled on some of the side effects of the family planning methods (Apanga & Adam, 2015).

Similar findings were also reported in a study done in Uganda where women stated that they face the following challenges in accessing family planning services; services far away from their home and services not available. In the same study according to the key informant (KI), rampant absenteeism from work among the family planning providers was also a key barrier to the utilization of FP services (Ouma *et al.*, 2016).

Other barriers at the health provider level include lack of knowledge, skills and motivation among the providers, bias for or against certain FP methods as well as unjustified limit in the provision of certain FP methods and poor management of adverse effect or side effects. At health care facility; inadequate human and financial resources, failure to integrate FP services with other maternal and child health services (MCHs) or HIV/AIDS services, geographical inaccessibility, service fees and rampant stock out of family planning commodities, equipment and supplies (Jacobstein *et al.*, 2013).

Studies done in Malawi recommended that other fistula surgeons also ensure that their patients are provided with the comprehensive one-on-one educational counseling that

emphasizes the need to wait for 2 years before attempting to conceive and to receive appropriate antenatal and delivery care at a hospital for any future pregnancies to minimize fistula recurrence and poor obstetric outcomes (Kopp et al, 2014). In addition, they recommend that other fistula centers train their staff in all methods of family planning, so that they are comfortable with counseling patients about all options prior to discharge and with providing these methods on site as needed. Further efforts by organizations that care for women with OF should focus on assisting women with achieving their reproductive goals after OF repair, whether that be pregnancy or prevention of unwanted pregnancy. These efforts will greatly assist a population of women for whom reintegration and restoration of dignity is closely tied to their ability to achieve their reproductive goals.

2.5 Research Gaps

From the reviewed literature, it is evident that researchers from different parts of the world show the need to integrate of family planning services with OF services (Uchendu, Adeoti, Adeyera and Olabumuyi (2019); the need for the health directorates to intensify health education on the benefits of family planning with male involvement (Apanga & Adam, 2015), while others have suggested the need for governments to scale up family planning services to make it more accessible (Nuwasiima et al., 2019). However, the above studies fails to exhaustively interrogate the determinants of family planning utilization by women post obstetric fistula repair. Additionally, there is scanty literature on the barriers to utilization of family planning services among women post obstetric fistula repair. Further, the literature from different settings have not shown that the variables proposed by this study namely; the patient related factors and the health system related factors have been given priority in various studies as the factors influencing the utilization of Family Planning among women post obstetric fistula repair. However, the current study considered this a conceptual and contextual gap that needed to be addressed at Kenyatta National Hospital to get a clear picture of the influence of these variariables on the utilization of family planning services among women post obstetric fistula repair in Kenyan setup.

Notwithstanding the findings from the previously mentioned empirical studies, most studies (for instance, Alayande *et al.*, 2017; Lawani *et al.*, 2015; Uchendu, Adeoti, Adeyera and Olabumuyi (2019; Apanga & Adam, 2015; Nuwasiima et al., 2019) employed either exclusively qualitative or quantitative approach. A study which employs exclusively the quantitative approach may fall short of attaining an in-depth understanding and individual perspective of the determinants of utilization of family planning services among women post obstetric fistula repair, apart from having its findings generalizable to other areas. Likewise, studies that employ exclusively the qualitative approach also fall short of the capacity to generalize their findings to other areas, except having an in-depth understanding of the the determinants of utilization of family planning services among women post obstetric fistula repair. This presented a methodological gap.

Therefore, the current study sought to address this methodological gap by employing a mixed methods approach which combines both quantitative and qualitative approaches, benefiting from the strengths of both approaches and overcoming the weaknesses of one approach by the other. The quantitative approach has the advantage of covering many study participants while the qualitative approach elicits in-depth understanding of the phenomenon at hand by bringing out individual participant's personal experiences and perspectives.

Finally from the reviewed literature, some studies (such as Apanga & Adam, 2015; Eittah & Amer, 2019) were conducted in highly advanced countries in matters of health system infrastructure, others in developing countries and in least developed countries. There are many differences, even among those countries of the developed world, depending on the continent, the health policy guiding the the utilization of family planning services among women post obstetric fistula repair. This study therefore was limited to identify the determinants of utilization of family planning services among women post obstetric fistula repair. This study therefore was limited to identify the determinants of utilization of family planning services among women post obstetric fistula repair in KNH.

2.6 Theoretical Framework

Dorothea Orem's Self-Care Deficit Theory (SCDT)

The theoretical framework to be utilized in this study will be Dorothea Orem's Self- Care Deficit which attributes that everyone is capable of their self-care. This includes actions that individuals freely do on their own to maintain health and their well-being (Orem, 1985). The nurse's action therefore is geared towards the individual achieving this responsibility. First by identifying and

prioritizing the client's unmet self-care needs (deficits) and secondly selecting methods of assisting the client to compensate for or overcome his self-care deficits. This theory is relevant in this study because it reiterates the importance of the client taking responsibility of her health after repair to prevent recurrence or failed uptake of the fistula repair. She will therefore consider having family planning till she recovers fully before conceiving again.

2.7 Conceptual Framework

The interaction between variables has been explored in the literature review. In summary, the patient-related factors influence the use of family planning after OF repair. Older age, higher level of education, those who have used FP previously, support from the partner or spouse have a positive effect on uptake of FP methods. Myths and cultural beliefs towards family planning negatively impact on utilization. Health system factors like affordability, availability and accessibility were seen to play a major role in hindering the women accessing FP services.



Figure 2.1: Conceptual Framework

2.8 Summary of the Literature Review

Obstetric Fistula therefore, is a condition that can be prevented as well as treated surgically. To promote optimal healing and prevent fistula recurrence, women are counseled to wait for at least two years before subsequent delivery. Following surgical repair, Family Planning helps to protect a repaired fistula recurrence by delaying pregnancy. This guarantees a woman the opportunity to plan when and how to have children as it increases her fertility awareness.

Studies have shown that various factors affect utilization of FP. Although majority of the women in various studies have basic education with knowledge of family planning, and family planningmethods, only a few utilize the services post OF repair. Personal

experience on previous use, knowledge, side effects, spousal support, accessibility, availability and affordability of family planning services are very important in facilitating the utilization of the FP services. FP services are offered free or at subsidized fee in the county public health facilities but unfortunately not all methods are available in all these facilities. Hence, women are forced to look for these services far which is costly and tiring.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter dealt with materials and methods that were used to evaluate the determinants to utilization of family planning services among women post obstetric fistula repair in KNH. It covered a description of the study area, methods of data collection and analysis.

3.2 Research Design

The research adopted a cross-sectional study design to gather data on utilization of family planning services among women post obstetric fistula repair in KNH. Cross-sectional descriptive design was suitable in this study because of its appropriateness in establishing relationship between the variables and facilitating the collection of information for determining the population parameters. Descriptive studies are not only restricted to fact findings, but may often result in the formulation of solutions to significant problems (Kerlinger, 1969). Both quantitative and qualitative data collection method were used to evaluate the utilization of family planning services among women post obstetric fistula repair in KNH. This gave a picture of the utilization of family planning services among women post OF repair in Kenya.

3.3 Study Area

The study was conducted in Kenyatta National Hospital, VVF clinic (Clinic 66). KNH is currently the largest referral and teaching hospital in Kenya and East Africa in general. It is located in the capital city of Kenya, Nairobi, about 3.5 kilometres west of the Central Business District, immediate west of Upper Hill in Nairobi in approximately 45.7 acres. The hospital offers both general medical and surgical services. It employs over 6000 staffs comprising both clinical and administrative staff. KNH has a bed capacity of 1800 with 22 out-patient clinics, 24 operating rooms (16 specialised) and Accident and Emergency

Department. It serves as a teaching hospital to many institutions including University of Nairobi's College of Health Sciences, Kenya Medical Training College, and other training institutions both local and international. KNH is the apex of hospital referral system in Kenya being equipped with machinery and specialist human resource, offering quality specialised health care services.

Kenyatta National Hospital (KNH) is the largest referral hospital in Kenya. It's currently the only public health facility that is offering routine surgical repair of, i.e almost on a weekly basis.

Clinic 66 is a specialized reproductive health outpatient service delivery clinic situated next to the Accident and Emergency department. It is opened from Monday to Friday at 8:00 am to 4:30 pm and remains closed during weekends and public holidays. It caters for Family planning services, cervical cancer screening, colposcopy and LEEP procedures, Fertility clinic and Urogynaecology clinic which cater for female genital fistulae. Patients suffering from urogynaecology conditions are seen daily in the clinic with a consultant's clinic every Mondays. Mondays being the main clinic day for urogynaecology conditions. Following repair, the patients are reviewed two weeks after, then a month later, then at three months and finally at six months post repair. During these visits the client is attended to holistically from vital signs, history of medical and general well- being plus check -up of fistula repair uptake. Any other complaints and concerns raised are attended to accordingly.

Ward 1B is situated on the first floor of the tower block at KNH. It is under the obstetrics and gynaecology department with a capacity of 30 in-patient beds. The ward caters for female non-acute gynaecological conditions like fibroids, obstetric fistula, cancers of the reproductive organs (minus breasts) i.e. vulva, ovaries, cervix, trophoblastic disease among others. Therefore,Ward 1B was chosen for pre-testing because it exibits similar characteristics as that of clinic 66 since it caters for the post OF patients. KNH has therefore, a functioning clinic for women with OF on a walk-in basis on working days where approximately 30 women post OF repair are seen monthly in the OF clinic. KNH has specialists in fistula care which includes fistula surgeons and fistula nurses. There is also specific theatre for fistula repair as well as a ward for managing both pre and post fistula repaired patients (ward 1B). This has made it easy in screening and managing of patients with OF.

3.4 Study Population

The target population comprised of all women with OF who had been repaired surgically attending Clinic 66 in KNH. This was obtained through their file records as well as OF register. Reproductive health nurses with experience of working in OF clinic for more than 3 years were interviewed as key informants.

3.5 Sample Size Determination

The sample size was calculated based on Fischer's formula where the target population is more than 10,000 (Mugenda & Mugenda, 2003). The formula is

n=Z²pq

 \mathbf{d}^2

n= the desired sample size (N>10,000)

Z= standard normal deviation at the required confidence level (1.96)

p = proportion in the target population estimated to have the same characteristics being measured (0.5).

q= 1-p

d= the level of statistical set (0.05)

$$n = (1.96)^2 (0.5) (0.5)$$

 $(0.05)^2$

$n=3.8416 \times 0.5 \times 0.5 = 384$

0.0025

The calculated sample size was 384

Approximately 35 patients post OF repair are seen in the clinic per month. For two months, this will be about 70 patients. Since the target population was less than 10,000, the Fischer et al, (2003) formula was employed.

The Fischer formula is as follows:

nf=n/(1+((n-1)/N))

Where;

nf=Reduced Sample Size

n= Initial Sample Size (384)

N=Target Population

nf=384/(1+((384-1)/70)

nf=59

Adjusted sample size = 59 + 1 (to take care of non-response)

However, since the numbers were low, and resources not affected, all clients who came for review post repair were interviewed. The total sample for the two months was 60. The Key informants were qualified nurses registered by the nursing council of Kenya and working in clinic 66. In total **5** nurses were purposively sampled and interviewed as key informants.

3.6 Inclusion/Exclusion Criteria

3.6.1 Inclusion criteria

The participants were all women who had had OF and had been repaired surgically aged 15-49 years of age attending clinic 66 in KNH. The Key informants were qualified nurses registered by the nursing council of Kenya and working in clinic 66. The participants were able and willing to participate in the study by signing informed consent.

3.6.2 Exclusion criteria

All women with OF and had been repaired surgically attending clinic 66 in KNH but were medically unfit to withstand interview process during the study period were excluded. This also applied to those who did not consent to take part in the study. Registered nurses working in clinic 66 on contract basis were excluded.

3.7 Sampling Procedure

All the study participants who met the inclusion criteria were recruited into the study as they sought the routine clinical care services in the clinic. Once the client had been attended in the clinic and had received all the services they came for, the investigator approached and invited her for participation in the study. This ensured services were not interrupted. Informed consent was administered to the eligible clients after explaining about the study, procedures, risks, benefits, discomforts and confidentiality. Purposive sampling was used to select the key informants from the population of experienced reproductive health nurses. From them, information for the qualitative arm of the study was collected. This included all the 5 experienced nurses working in the OF clinic at KNH. Purposive sampling was suitable because the researcher targeted a group of people believed to have key informationrelevant to this research. (Kombo & Tromp, 2006).

3.8 Data Collection Tool(s)

Structured questionnaires were used to collect data on determinants to utilization of family planning services among women post obstetric fistula repair in KNH. The questionnaires were designed to contain both closed and open-ended questions. This ranged from sociodemographic data, level of utilizations of FP services and determinants to utilization of FP services. Interview guide was used to collect expert information from the key informants who were nurses experienced in care.

3.9 Validity and Reliability of Data Collection Tool(s)

3.9.1 Validity

The questionnaire was administered by the principal investigator who was experienced in OF care. This was reviewed by my supervisors to ensure the same.

3.9.2 Reliability

Questionnaires were pre-tested and retested on 6 women with post OF repair. This was done at KNH, ward 1B where these patients with OF are admitted and nursed post-operatively before discharge. These clients did not participate in the actual exercise ensuring there was consistency of the questions. The questions in the data collection tool were refined accordingly.

3.10 Data Collection Procedure

Structured interviewer administered questionnaires were used to collect quantitative data which included socio-demographic characteristics, clinical history and family planning utilization factors. The primary data which comprised of socio-demographic data, history of the OF, knowledge and utilization of family planning was obtained from the clients while secondary data which confirmed diagnosis of obstetric fistula, surgery performed, and date of operation was obtained from the patient files. This ensured dealing with a patient who had obstetric fistula and was the right client for the study. All the respondents were asked identical questions in the same sequence. The interviews were conducted in either English or Kiswahili which are both official languages. The questionnaire enabled the collection of detailed information on the utilization of family planning post fistula repair.

For the qualitative data collection process, the researcher used an oral interview guide to interview the key informants who were selected from the nurses stationed in clinic 66. The key informants were qualified Kenya Registered Community Health Nurses working in OF clinic in KNH who had experience in offering services on OF. They were scheduled for an interview at their convenience which was interactive using questionnaires and interview schedule. This enabled the researcher to ask questions or make comments that were intended to guide the respondents to give information that would help in meeting the objectives of the study. The key informants gave their expert opinion regarding the linked services of OF care and FP services under one roof in terms of accessibility, affordability, availability and acceptance by the clients. The nurses also gave their general views and experiences regarding the clients' opinion on future pregnancies, family planning response and uptake among women post OF surgical repair. Each key informant was given a code name (identifier) and a voice (tape) recorder was used to record the key informant interviews to ensure all the opinions and views of the nurses were captured.

3.11 Data Management

3.11.1 Data Entry and Analysis

After collection of the questionnaires, the researcher read through to analyze how the items were responded to. Data was then cleaned and sorted to ensure all information was accurate. The researcher then coded, categorized and analyzed it using SPSS (Statistical Package for Social Science) version 23.0. The study population was described by summarizing the patient-related factors into percentages and means/medians for categorical and continuous data respectively. Utilization of family planning was analyzed and presented using proportion and 95% confidence interval. Factors associated with utilization of FP methods were tested using chi square test. Health system factors were collected from the clients and analyzed to check the association with FP use. Odds ratios was calculated and reported as estimates of relative risk of FP use in clients who have undergone OF surgical repair. Statistical significance was interpreted at 5% (p < 0.05).

Qualitative data from the voice (tape) recorders were transcribed for each of the key informant interviewed. The transcribed data was then grouped and coded in NVivo 12.0 software to create themes for interpretations. The themes were subjected to content analysis and presented as narratives with verbatim reporting done where necessary. Qualitative data in form of open-ended items in the questionnaires were coded and analyzed in Statistical Package for Social Sciences (SPSS) version 23.0 and analyzed quantitatively. The results were then tabulated.

3.11.2 Data Presentation

The researcher presented the data using bar graphs, pie charts percentages, frequency tables and narrative.

3.12 Ethical Consideration

Permission to undertake this study was obtained from Kenyatta National Hospital/ University of Nairobi Ethics and Review Committee and Hospital Administration upon approval granted by graduate school, JKUAT. Participation in the study was on voluntary basis and an Informed Consent from each eligible respondent ensuring confidentiality was obtained.There were no adverse effects in the study. It was made clear to the participants that there would be no incentives or material gain from participating in the study. The questionnaires and the interview guides will be shredded after publishing the findings of this study.

3.13 Study Assumption

This study assumed that;

- i. Family planning services are always available for all women post OF repair.
- ii. There are always factors that enable women post OF repair accessing FP services.
- iii. There are always factors that constrains or are obstacle for women post OF repair to access FP services.

3.14 Study Limitation

The study was limited to women post OF repair attending OF clinic review in KNH. The results may therefore not be generalizable to the general population.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the analysis, interpretation and presentation of the findings on determinants to utilization of family planning services among women post obstetric fistula repair in KNH.

4.2 Response Rate

The number of questionnaires that were administered to the respondents was 60 and all the questionnaires were duly filled and returned. This represented an overall successful response rate of 100%.

4.3 Socio-Demographic Characteristics of the Respondents

Data was collected in KNH where, sixty (60) women who sought OF care services were interviewed. As shown in Table 4.1, the mean age was 32.4 years (SD 7.6 years) and 55% were married. All were literate with 40% having secondary level of education while 23.3% and 8.3% had college and university levels of education respectively. Majority (90%) were Christians and 80% lived in the urban setting. Unemployment rate was at 26.7% and the highest proportion (36.7%) earned between Kshs. 1,000 and Kshs. 10,000 per a month.

Variable	Frequency (%)
Mean age (SD)	32.4 (7.6)
Min-Max	18-46
Marital status	
Single	17 (28.3)
Married	33 (55.0)
Divorced/ separated	10 (16.7)
Education	
Informal	6 (10.0)
Primary level	11 (18.3)
Secondary level	24 (40.0)
College	14 (23.3)
University	5 (8.3)
Religion	
Christianity	54 (90.0)
Islam	6 (10.0)
Residence	
Rural	12 (20.0)
Urban	48 (80.0)
Employment status	
Self employed	21 (35.0)
Employed	17 (28.3)
Casual laborer	5 (8.3)
A farmer	1 (1.7)
Not employed	16 (26.7)
Monthly family income (KES)	
1,000- 10,000	22 (36.7)
11,000- 20,000	9 (15.0)
21,000- 30,000	14 (23.3)
≥30,000	15 (25.0)

Table 4.1: Demographic characteristics

4.4 Proportion of Women Post OF Repair Utilizing Family Planning Services at the KNH

The first objective of the study was to determine the proportion of women post OF repair utilizing family planning services at the KNH. As shown in Figure 4.1, 90% of the women were aware of family planning methods which included injectable (85%), pills (83.3%) and IUCD (76.7%) among others. The source of information for FP methods was mainly friends (58%), health provider (45%), hospital facility (38.3%) and school (31.7%). It was found that, only a quarter (25%) of the women took up FP after repair of obstetric fistula (Figure 4.1) with a third (33.3%) using injectable, 20% IUCD and another 20% implant.



Figure 4.1: Proportion of FP utilization post repair

One of the key informants who were interviewed said" *Care givers advise OF clients on need for FP to avoid getting pregnant early before proper healing. Unfortunately, some women say they were divorced or got separated after they got OF, hence see no reason to use FP because they don't have partners/spouses*" "Nevertheless a small proportion of *patients repaired of OF have admitted to be using FP*"

Another key informant said" On very rare occasions you will get a client who is married seeking FP services usually from the second review which is only a month after the

surgery. Injections and IUCD being the preferred methods. But this number is very minimal"

Variable	Frequency (%)
Are you aware of family planning methods?	
Yes	54 (90.0)
No	6 (10.0)
Family planning known	
IUCD	46 (76.7)
Pills	50 (83.3)
Injectables	51 (85.0)
Condoms	37 (61.7)
Implant	41 (68.3)
Tubal ligation	30 (50.0)
Herbal	3 (5.0)
Source of information on the FP methods	
Radio	4 (6.7)
Health provider	27 (45.0)
Friends	35 (58.3)
School	19 (31.7)
Hospital facility	23 (38.3)
Chief /Baraza/Church	2 (3.3)
Other	2 (3.3)
Did you commence the FP after the OF repair?	
Yes	15 (25.0)
No	45 (75.0)
Current FP Method	
IUCD	3 (20.0)
Pills	2 (13.3)
Injectables	5 (33.3)
Condoms	2 (13.3)
Implant	3 (20.0)

Table 4.2: Level of utilization of FP post OF repair

4.5 Patient Related Factors Influencing Utilization of Family Planning Among Women Post OF Repair at Kenyatta National Hospital

The second objective was to determine the patient related factors influencing utilization of family planning among women post OF repair at KNH. The variables discussed under this were; the number of children the respondents had, the gender of the children, plans to have more children in the future, having knowledge and awareness on FP services, having used FP before, respondents having been counseled on the benefits of using family planning services post repair to include child spacing, prevention of the occurrence, prevention of pregnancy, prevention of STIs and HIV/AIDS and finally husbands/Spouse support.

4.5.1 Number of Children and Gender of the Respondents

The women with obstetric fistula and had been repaired surgically attending clinic 66 in KNH were asked to indicate whether they had children, their gender and whether they wished to have more children in the future. Majority (86.7%) indicated that they had children, while 13.30% indicated that they had no children. The distribution of female versus male children was almost uniform in the population with a median of 1 in each category. Those who wished to have more children in the future series (75%) of the women reported live births in their last delivery and a half (50%) planned to get pregnant within 2 years. Results are presented in Table 4.3.

Patient Related Factors	No	%	
Number of Children			
1	40	40	
2	28	80	
3	19	20	
4	7	80	
5	1	90	
6	1	90	
Number of Female/Male Children			
0-Female	28	80	
0-Male	30	80	
1-Female	46	20	
1-Male	44	20	
2-Females	21	20	
2-Males	15	40	
3-Females	1	90	
3-Males	7	70	
4-Females	1	90	
4-Males	1	90	
Wish to Have More Children			
Yes		82	
No		18	

Table 4.3: Number of Children and Gender

Based on the results presented in Table 4.3, most (40.40%) of the women had one child, 28.80% had two children, 19.20% others indicated that they had 3 children, while 7.80% had 4 children. The results show that 1.90% had 5 children and another 1.90% of the women had six children.

The results showed that most of the respondents (46.20%) had one female child, 28.80% indicated that they had no female child, 21.20% of the women had 2 female children. The results further showed that 1.90% of the women had 3 female children and another 1.90%

had 4 female children. The results in addition showed that most (44.20%) of the women indicated that they had 1 male child. 30.80% indicated that they had no male children. In addition15.40% of the respondents indicated that they had 2 male children, 7.70% had three male children and only 1.90% of the women had four male children.

4.5.2 Number of Desired Children in Future

Those women who were found to have children were asked whether they could wish to have more children or not. Based on the results, majority (82%) of the women indicated that they wished to have more children in the future, while 18% others were not ready to have more children in the future.

Further, the women who had the desire of having more children in the future were asked to indicate the number of children they would wish to have in the future. The results are presented in Figure 4.2.



Figure 4.2: Number of Desired Children in Future

The results in Figure 4.2 indicate that most (44.90%) of the women desired to have two children in the future regardless of the gender of the children, 32.70% indicated that they

would wish to have just one child in the future, 16.30% others indicated that they would wish to have four more children in the future. The results also showed that 4.10% of the women wished they could have three more children in the future with just 2.00% wishing for five more children in the future. The results imply that most of the women with OF attending clinic 66 in KNH have the desire of having two more children in the future.

4.5.3 Outcome of Last Delivery

The respondents were further asked to indicate the outcome of their last deliveries. Their responses were captured and are presented in Figure 4.3 which showed three quarters (75.0%) of the women had alive delivery in their previous births, 20% indicated that their last deliveries resulted into a dead delivery while 5.0% of the respondents did not respond on this.



Figure 4.3: Outcome of Last Delivery

4.5.4 Time To Get Future Pregnancy

Finally, the respondents were asked to indicate the time plans they had to get pregnant in years. The results were captured in Figure 4.4 which showed that most (31.70%) of the

respondents had the plans of getting pregnant after three or more years, 26.70% had the plans of getting pregnant after between 1-2 years, 23.30% others had the plans of getting pregnant after a period of less than one year, while only 18.30% of the women did not have any plans of getting pregnant in the future. The results meant that most of the women with OF attending clinic 66 in KNH have the plans of getting pregnant after a period of three years or less.



Figure 4.4: Time ones Plans to Get Pregnant In future

4.5.6 Knowledge and Awareness on FP Services

As shown in Table 4.4, 80% of the women used FP because they had used the methods before. The other important facilitators of FP utilization included counseling after OF repair (53.3%) and having knowledge and awareness on FP services (46.7%). Having support from husbands or spouses offered the least influence on uptake at 20%.

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Patient's Knowledge and Awareness on FP services	f (%)
Having knowledge and awareness on FP services	7 (46.7)
Having used FP before	12 (80.0)
Was counseled on the benefits of using family planning services post	8 (53.3)
repair to include child spacing, prevention of the occurrence of,	
prevention of pregnancy, prevention of STIs and HIV/AIDS	
Husbands/Spouse support	3 (20.0)

Based on the results presented in Table **4.5**, the chi-square test result between respondents education levels and commencement of family planning had a chi-square value of 5.164 and a p-value =0.271. The conclusion was therefore that education level of the women had no significant influence on the commencement of family planning. The results also show that the chi-square test result between marital status and commencement of family planning was 4.171 and a p-value=0.124. The conclusion was therefore that marital status does not significantly influence the commencement of family planning among the women. The relationship between religion and commencement of family planning yielded χ^2 =2.222 and p-value=0.136 indicating that religion did not have significant influence on the commencement of family planning among the women with OF post repair. The results further indicate that the relationship between residence of the respondent and commencement of family planning had χ^2 =2.222 and p-value=0.136 indicating that religion did not have significant influence on the commencement of family planning among the women with OF post repair. The results further indicate that the relationship between residence of the respondent and commencement of family planning had χ^2 =2.222 and p-value=0.136 indicating that religinate the relationship between residence of the respondent and commencement of family planning had χ^2 =2.222 and p-value=0.136 indicating that the relationship between residence of the respondent and commencement of family planning had χ^2 =2.222 and p-value=0.136 indicating that the relationship between residence of the respondent and commencement of family planning had χ^2 =2.222 and p-value=0.136 indicating that there was no significant influence of residence of the respondent and commencement of family planning.

Similarly, the results revealed that employment status of the respondent did not have significance influence on the time they commenced family planning as indicated by ($\chi^2 = 1.531$, *p*-value=0.821). The results further showed that monthly family income did not significantly influence the time of commencement of family planning ($\chi^2 = 2.044$, *p*-value=0.563). The study also revealed that having children or not having any child had no

significant influence on the time the women commenced family planning as indicated by $(\chi^2 = 3.077, p\text{-value}=0.079).$

Further, the results show that the relationship between desire to have children in future and time of commencement of family planning program yielded a $\chi^2=0.928$, *pvalue*=0.335 implying that the desire to have children in the future had no significant influence on the time the women commenced family planning. Based on the findings, the outcome of the last delivery was found to have significant influence on the time of commencement of family planning as indicated by ($\chi^2=5.429$, *p*-value=0.020). This means that, a woman would consider the outcome of her last delivery before commencing family planning program. Finally, the results show that there was significant influence of time plan to get pregnant in the future and commencement of family planning as shown by ($\chi^2=8.722$, *p*-value=0.033). The result imply thatwomen with obstetric fistula and had been repaired surgically attending clinic 66 in KNH are considering time plan to get pregnant in the future before commencing the family planning program.

Variable	FP	No FP	OR (95% CI)	Chi-	P- value
				square	
				statistic	
Education					
Informal	0	6 (100.0)	-		
Primary level	2 (18.2)	9 (81.8)	0.5 (0.1-2.9)	5.164	0.271
Secondary level	7 (29.2)	17 (70.8)	0.9 (0.2-3.3)		
College/University	6 (31.6)	13 (68.4)	1.0		
Marital status					
Married	5 (15.2)	28 (84.8)	1.0		
Single	4 (23.5)	13 (76.5)	1.7 (0.4-7.5)	4.171	0.124
Divorced/ separated	6 (60.0)	4 (40.0)	8.4 (1.7-40.9)		
Religion\\\\\\\					
Christianity	15 (27.8)	39 (72.2)	-	2.222	0.136
Islam	0	6 (100.0)			
Residence					
Rural	1 (8.3)	11 (91.7)	0.2 (0-1.9)	2.222	0.136
Urban	14 (29.2)	34 (70.8)	1.0		
Employment status					
Self-employed/Employed	10(263)	28 (737)	1.2 (0.4-4.2)	1.531	0.821
Not employed/Casual	5(22.7)	17(773)	1.0		
laborer/farmer	5 (22.7)	17 (77.5)			
Monthly family income					
(KES)	7 (31.8)	15 (68 2)	3.0 (0.5-17.3)		
1,000- 10,000	1(111)	8 (88 9)	0.8 (0.1-10.5)	2.044	0.563
11,000- 20,000	5(357)	9(64.3)	3.6 (0.6-22.9)		
21,000- 30,000	2(13.3)	13 (86 7)	1.0		
≥30,000	2 (15.5)	15 (80.7)			
Have children					
Yes	15 (28.8)	37 (71.2)	-	3.077	0.079
No	0	8 (100.0)			
Median number of children			-		
(IQR)	2 (1-3)	2 (1-3)		1.087	0.955
Median number of female			-		
children (IQR)	1 (0-1)	1 (0-2)		3.925	0.416
Median number of male			-		
children (IQR)	1 (0-2)	1 (0-1)		6.364	0.174
Wish to have more children					
Yes					
No	12 (24.5)	37 (75.5)	0.9 (0.2-3.8)	0.928	0.335
	3 (27.3)	8 (72.7)	1.0		
Median number of future			-		
children (IQR)	1 (1-2)	2 (2-3)		7.584	0.108
Outcome of last delivery					
Alive	15 (33.3)	30 (66.7)	-		
Dead	0	12 (100.0)		5.429	0.020
Time plan to get pregnant in					
years			-		
<1	0	14 (100.0)			
1-2	3 (18.8)	13 (81.3)	0.6 (0.1-3.8)	8.722	0.033
≥3	9 (47.4)	10 (52.6)	2.4 (0.5-11.9)		
None	3 (27.3)	8 (72.7)	1.0		

Table 4.5: Patient Related Factors Influencing FP Utilization in Women Post Repair

In relation to the above, one key informant said "issues affecting individual client usually determine her willingness to using FP services. Some because of lack of a baby or more want to deliver immediately hence they do not adhere to the 2-year spacing advice. Mainly because of social pressure especially family where they are considered inferior due to lack of babies. Also, negative attitude towards artificial FP methods. Misinformation on FP is seen a lot hence to an extent some relate O.F. to previous FP use.

Another key informant reiterated "some clients report a lot of challenges from their uncooperative partners /spouses who refuse to wait for 6months for the fistula to heal and so resume sexual intercourse early. These spouses again demand for children. Again, most of these women don't have children hence they are eager to conceive to have children therefore they don't comply with the abstinence and spacing/long wait before delivery.

4.6 Health System Related Factors that Influence the Utilization of Family Planning Services Among Women Post Obstetric Fistula Repair at the KNH

This third study objective was to establish the health system related factors that influence the utilization of Family Planning services among women post obstetric fistula repair at the Kenyatta National Hospital. The key variables addressed under this section included; availability of facilities/equipment at KNH, accessibility of family planning service is a challenge, some of the healthcare providers are incompetent in their work, affordability of the family planning services, health workers' support and professional advice, attitude of health workers towards women with post OF and finally difficulty in accessing health facility, no FP commodities, services and supplies non -available health providers.The results are presented in Table 4.6.

Table 4.6: Health System Related Factors Influencing Utilization of FP Services PostRepair

Health System Related Factors	Frequency (%)	Chi-Square Statistics
Health System Related Factors Influencing		
utilization of family planning		
Availability of facilities/equipment	6 (13.3)	
Accessibility of family planning service is a challenge	10 (22.2)	
Some of the healthcare providers are incompetent in their work	22 (48.9)	$\chi^2 = 4.000,$ p=0.046
Affordability of the family planning services	9 (20.0)	1
Health workers' support and professional	14 (31.1)	
advice	10 (22.2)	
Attitude of health workers towards women	× ,	
with post OF	4 (8.9)	
Difficulty in accessing health facility, no FP		
commodities, services and supplies. Non -		
available health providers		
Is it expensive to get family planning		
services in your health facility?		
Yes	10 (16.7)	
No	50 (83.3)	$\chi^2 = 1.429$,
Is it affordable to get the services at KNH?		p=0.232
No	52(86.6)	-
Yes	8(13.4)	
What are the other health related		
Challenges do you face?		
Mistreatment by healthcare providers	1 (1.7)	
Side effects of some of the methods	25 (41.7)	
Negligence on the side of healthcare providers	4 (6.7)	χ²=12.857,
Some facilities are unavailable, so one has to	28(46.7)	p = 0.000
seek the services else where		
Long distance to accessing KNH where the OF was repaired	15(25.0)	
Lack of counseling by healthcare providers	25(41.7)	

Based on the results in Table 4.6, (13.3%) of the women had the feeling that availability of facilities/equipment was one of the health-related factors influencing utilization of FP Services Post Repair. They indicated sometimes they go to other hospitals and cannot be attended to due to lack of certain services and that the availability of facilities/equipment will ensure adequate care to be provided to the consumer at every visit. In addition, 22.2% of the women indicated that accessibility of family planning service was a serious challenge hindering them from utilizing family planning services, most (48.9%) of the respondents indicated that competence of health workers was one of the main health related factors influencing utilization. This is because in some facilities the clients went previously the health workers indicated inadequate skills especially the long-term family planning methods and were forced to get services to bigger facilities like KNH. Twenty percent (20.0%) of the respondents indicated that affordability of the family planning services affected their level of utilization of family planning, 31.1% of the women indicated that health workers' support and professional advice was an important health related factor influencing the uptake of family planning services. The negative attitude of healthcare providers was another factor as indicated by 22.2% of the respondents. The respondents were further asked if it was expensive to acquire family planning services in their facility or not and most (83.3%) indicated that it was not expensive with only 16.7% feeling it was expensive and unaffordable. However, 86.6% said they had financial challenges in accessing FP services at KNH since it was not free and even more expensive for the long-term methods which majority preferred.

The researcher asked the women to indicate other health related challenges they were facing with regards to utilization of family planning and 1.7% of them indicated mistreatment by healthcare providers, 41.4% indicated that they were experiencing the side effects of some of the methods they were subjected to, 6.7% cited negligence on the side of the healthcare providers as a result of rampant absenteeism from work among family planning providers . In addition, 46.7% indicated that some services were lacking in the hospitals and therefore they were forced so to seek the services elsewhere in private facilities or higher institutions like KNH. Some 25.0% of the respondents complained of

long distance and hence expensive reaching KNH for FP services and finally 41.7% of the women indicated that they lacked counseling by healthcare providers.

Further, chi-square test was used to determine the influence of health system related factors on the utilization of family planning. Results revealed that health related factors had significant influence on the utilization of family planning by the women as indicated by ($\chi^2=4.000$, p=0.046). The study in addition shows that affordability of healthcare services did not significantly influence the utilization on family planning ($\chi^2=1.429$, p=0.232).

The Key Informants were further asked to share some of the information provided to the clients during counselling post repair. One of them indicated that;

"...advised to take plenty of fluids, soft diet and deliver via C/S (hospital delivery). No specific years of spacing but abstain from sexual intercourse for 6 months (VVF) and 3 months (RVF). For the 1st 3-6 months not advised on FP but stress on abstinence. Advocates for separation from spouse if have an issue with abstinence." This means that Clients are advised mainly on abstinence for 3 or 6 months depending on the type of surgery. This is meant to allow for complete healing. FP counseling is given after the abstinence period to delay pregnancy for a recommended period of 2 years".

Another key informant indicated that;

".... At 6 months of repair, clients are advised on all FP services and clients choose a method based on informed choice after discussing about all methods and their side effects." And for those with non-cooperative partners, a period of separation is recommended to allow healing During this period, an assessment is done to ensure healing has taken place before resuming sexual intercourse." During FP counseling, the clients are given information on FP methods and the side effects associated with each method.

The informants were then asked to indicate whether the family planning services were linked with the OF services under the same roof and to indicate whether there were any advantages on the same. Two informants responded to the question and their responses were as follows;

One of the informants indicated that;

"...Yes, the services are linked in the same roof. This aids in avoiding several movements as well as reduce on turnaround time by not queuing for payments twice." This implies that FP services are available under the same roof where OF repair is done and this means clients have minimal movement in accessing the services and eliminates double registration hence reduced waiting time.

Another informant indicated that;

"...Yes, the services are linked in the same roof. They receive advice in the same room that they can get all services hence no extra waiting period to walk around...... Those coming from very far, you refer back to the near facility after starting the method." This implies that the services are linked in the same roof; however, those who come from far are referred for FP services in a facility near to them so that they are able to be attended to near their areas of residence.

The informants were asked to indicate the challenges faced by post OF repaired women in accessing FP services at KNH and they responded as follows: -

One of the informants cited cost as one of the barriers to FP uptake;

"... Unfortunately, our FP services are at a fee though it's advisable to inform the clients of the charges."

Another informant added:

"...FP services are done at a fee in the facility hence comes as a barrier to uptake since most of these clients are unable to pay especially for the long-term methods". This means since the services are at a cost, those who are unable to pay go home without a method and are advised to visit any nearest facility where FP charges are free or at a minimal rate. Here, the big challenge is follow-up to identify if the client really went for the services or not (missed opportunity).

Another key informant said:

"...Some because of lack of baby or two want to deliver immediately hence they do not adhere to the 2-year spacing advice. Mainly because of social pressure especially family where they are considered inferior due to lack of babies. Also, negative attitude towards artificial FP methods. Misinformation on FP is seen a lot hence to an extent some relate O.F. to previous FP use. Some clients are not able to come back to the facility for FP services yet are unable to access FP services where they live especially due to long distance (accessibility issue)." This means that accessibility may also be an issue due to distance to come back for the services in the facility or because of financial constraints.

Another responded that;

"...Most clients don't access the FP services because of areas they are coming from. Due to poverty, are unable to access (come back) to KNH for review. Also due to uncooperative partners /spouses. Most of these women don't have children hence they are eager to conceive and have children therefore they don't comply with the abstinence and spacing/ long wait before delivery. The FP services are paid for." This means that the spouse also plays a big role and some wants children which may not accept to follow the advice given to the woman.
The researcher further asked the nurses to indicate the ways in which utilization of family planning services by repaired obstetric fistula women could be improved in the health facility and one informant responded as follows: -

"...there is need to link the services since we leave the mothers to go with no method yet services are available. Obstacle is that we do not offer free services...." This means that there is need to make the FP services free for OF women to eliminate the payment barrier during access of the services.

Further, another respondent indicated that;

"...there is need to do counselling before the operations. It is also advisable to do proper follow-up on both O.F & FP services...... NHIF does not pay for FP services at the facility & therefore even for those with NHIF cards must pay cash for the services. There is need for NHIF to have FP services incorporated in NHIF schedule to cater for these services especially clients treated for OFs and opt for long term FP method." This means that FP services should be incorporated among the services that are covered by NHIF cards to improve affordability.

Lastly, a key informant indicated that;

"...FP services should be included in the package of repair. To have prior counseling before repair on FP and also during follow ups to equip them with knowledge. If possible, the method to be offered as soon as the clients consents before they change their minds. Involve their partners (male involvement). FP services in the county hospitals are free, therefore can refer clients to those facilities. If KNH management can allow, the services be offered for free for the needy cases." This means that the partners should also be involved during counseling so as to understand the need abstain till the clients heal and to avoid getting pregnant for 2 years to aid in full recovery.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a discussion of the whole work and conclusions drawn from the findings. The chapter concludes by highlighting recommendations which are given according to what is to be done, by who and how.

5.2 Discussion of Findings

5.2.1 Proportion of Women Post OF Repair Utilizing Family Planning Services at the KNH

The study indicated that 31% recalled having been given the advise on need for FP use post operatively by the care givers at KNH to allow healing. It was noted that there was the importance to give such advise to promote total healing post repair. This is in line with studies done in Malawi which recommended that other fistula surgeons also ensure that their patients are provided with the comprehensive one-on-one educational counseling that emphasizes the need to wait for 2 years before attempting to conceive and to receive appropriate antenatal and delivery care at a hospital for any future pregnancies to minimize fistula recurrence and poor obstetric outcomes (Kopp et al., 2014).

Based on the findings, 90% of the women were aware of family planning methods which included injectable, pills and IUCD among others. Regarding the sources of information for FP, more than half (58%)of the respondents indicated that their source of information about FP was from friends, 45% of the women obtained the information from the various health facilities, while, 38.3% of the respondents indicated that they obtained the information from school. This coincides with a study in Nigeria which reported that majority of women (95.7%) were aware of modern FP methods but only 37.2% ended up utilizing FP after undergoing OF repair surgically (Lawani *et al.*, 2015).

Concerning the level of uptake of FP after repair of obstetric fistula, a quarter (25%) of the women took FP after repair of obstetric fistula with a third (33.3%) using injectable, a fifth (5%) used IUCD and another 20% of them indicated they used implant. Based therefore on the findings, utilization of family planning services was found to be very low in women after repair of obstetric fistula with only a quarter using contraceptive methods. This was slightly lower than the women studied in Nigeria who reported 37.2% utilization of FP after undergoing OF repair (Alayande (b) *et al.*, 2017;

Injectables were the most popularly used FP methods which was consistent with findings from other studies where women preferred to use injectable family planning methods as opposed to implants and oral pills (Alayande *et al.*,2017).

5.2.2 Patient Related Factors Influencing Utilization of Family Planning Among Women Post OF Repair at KNH

The study found that having a history of previous use of FP methods (80%) was the most important patient related facilitator of utilization of FP services after repair of obstetric fistula. Similar findings were reported in a study in Ghana where the reason for using FP services was because of having previously accessed and seen the benefits (Apanga & Adam, 2015). This may mean a combination of knowledge on and experience of FP methods, which was at 47% has a synergistic influence on utilization of the methods after OF repair due to the perceived benefits of FP methods and reduced fear of unknown associated with their use.

From our study 42% reported previous side effects as a cause of not utilizing FP.

A study by Ouma *et al.* (2016), in Uganda, reported that fear of side effects and fear of the cost of managing side effects impede women from accessing family planning services.

In Ghana, some women reported to have stopped using them after experiences they thought to be the side effects of the family planning methods (Apanga & Adam, 2015).

The study established that slightly more than two-fifths of the women had one child, 28.80% had two children and 19.20% had 3 children, while 7.80% had 4 children. The study further found that 1.90% of the women who took part in this study had 5 children and another 1.90% of the women had six children. This study also established that majority (82%) of women who had had children previously wished to have more children in the future. This is similar to a study done in Ghana (2015), showed that 87% of women post fistula desired to have more children in the future (Apanga & Adam, 2015).

The study established that, the low utilization of FP was still a big problem to the women despite the high level of awareness of FP services among the women. It was interesting to note that fewer women received information about family planning from hospitals despite the notion that all women receive counseling on family planning after OF repair. Previous studies in Ghana have shown that the awareness of the availability of FP services and the various FP methods has a great influence on their uptake (Apanga & Adam, 2015). However, the high level of awareness in this study did not increase uptake of the services in this population. Several studies have reported inconsistent link between awareness and utilization with some findings reporting positive correlation while in other populations the link was not established (Alayande *et al.*,2017; Nasir *et al.*, 2017). This indicates the complex relationship between knowledge and uptake of FP methods which may be influenced by other factors independent of the level of awareness among women.

In terms of desired number of children in the future, slightly more than two-fifths of the women desired to have two children in the future regardless of the gender of the children.

In addition, the outcome of the last delivery was found to have significant influence on the time of commencement of family planning. This meant that, a woman would consider the outcome of her last delivery before commencing family planning program. Finally, there was significant influence of time one plans to get pregnant in the future and commencement of family planning, implying that women with obstetric fistula and had been repaired surgically attending clinic 66 in KNH were considering time plan to get pregnant in the future before commencing the family planning program. Those who were found to desire having children within a period of 2 years post repair were 58.4%. A similar finding was seen in Nigeria where 46% desired to have more children sooner than less than 2 years (Lawani et al., 2015).

5.2.3 Health System Related Factors that Influence the Utilization of Family Planning Services

This study established that 13.3% percent of the women expressed that availability of facilities/equipment was one of the health-related factors influencing utilization of FP Services Post Repair. It was noted that 46.7% said some services were unavailable, so one had to seek the services else where. Similar experiences were reported from participants in a study in Ghana reported that, although they were aware of the benefits of using FP services, they did not get the services easily because they were being provided by health facilities that were situated far from their homes(Apang & Adam, 2015). Same findings were reported in a study done in Uganda where women reported to experiencing challenges of accessing Family Planning Services , due to long distance from their homes. (Ouma et al., 2016).

The women were found to sometimes go to other hospitals and cannot be attended to due to lack of certain services or equipment especially for the long-term family planning methods. Majority (48.9%) of them were convinced that the competence of health workers is one of the main health related factors influencing utilization. This is because in some facilities they went previously and could not get the long-term family planning methods and were forced to get services to bigger facilities like KNH.

The respondents were further asked if it was expensive to acquire family planning services in their facility or not and more than three-quarters of them indicated that it was expensive and they could not afford it with only 16.7% feeling it was not expensive. However, 86.6% said they had financial challenges in accessing FP services at KNH since it was not free and even more expensive for the long-term methods which majority preferred. Services at KNH are at a fee unlike in almost all other public hospitals in Kenya

where FP services are free having been exempted from the user fee (Agesa, 2016). A study in Nigeria reported 86.5% of participants identified affordability of FP services to be important to enhance utilization among women (Amo-Adjei et al., 2017).

Further, chi-square test was used which showed a significant influence of health system related factors on the utilization of family planning services. The study in addition established that affordability of healthcare services did not significantly influence the utilization on family planning if accessed within their reach but once referred for the services it became a big problem. Fourty six percent (46.7%) said some services are unavailable, so one has to seek the services else where. Similar experiences were reported from participants in a study in Ghana reported that, although they were aware of the benefits of using FP services, they did not get the services easily because they were being provided by health facilities that were situated far from their homes(Apang & Adam, 2015)13.3% of the women had the feeling that availability of facilities/equipment was one of the health-related factors influencing utilization of FP Services Post Repair.

5.3 Conclusions

Based on the findings this study made a number of conclusions.

- Utilization of family planning services in women after obstetric fistula repair was found to be low (25%) despite receiving counseling on the need to use the services in order to delay pregnancy for at least 2 years.
- Previous experience with family planning was an important factor that facilitated the increased likelihood use of the methods after OF repair. The barriers were mainly the fear of side effects.
- The outcome of the last delivery has significant influence on the time of commencement of family planning.
- There is significant influence of time plan to get pregnant in the future and commencement of family planning.

• Health system related factors influencing the utilization of family planning among women with post OF repair at KNH includes; availability of facilities/equipment, accessibility and affordability.

5.4 Recommendations

The study was conducted to establish the determinants of utilization of family planning services among women post obstetric fistula repair in KNH. The study recommends that:

- 1. There is need of health care workers to give all relevant information to the clients on family planning before repair and upon discharge to allow healing process and hence encourage uptake of FP post repair.
- 2. The government through the ministry of health should provide countrywide education to women on the basics of family planning and the importance of seeking such services in time.
- Family planning services should be rendered free or at a reduced cost for many to access. Or be incorporated among the services that are covered by NHIF cards to improve affordability.
- 4. Having the same services of O.F clinic and family planning services under one roof is of essence in facilitating uptake.

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APPENDICES

Appendix I: Questionnaire

Ensure that the respondent to this questionnaire is admitted to attending OF clinic for review or follow-up having been done OF repair surgically. Confirm by patients' file or card. To be filled by the principle researcher. Please put a tick ($\sqrt{}$) inside the boxes provided to indicate appropriate response. (Confirm with the respondent's file where necessary).

Section A: Demographic information

1)	Age	(in complete years).
2)	Education level	
	a. Informal	
	b. Primary level	
	c. Secondary level	
	d. College	
	e. University	
3)	Marital status	
	a. Single	
	b. Married	
	c. Widowed	
	d. Divorced/ separated	
4)	Religion	
	a. Christianity	
	b. Islam	
	c. Others	
5)	Residence	
	a. Rural	
	b. Urban	

6) Employment status

a.	Self employed	
b.	Employed	
с.	Casual labourer	
d.	A farmer	
e.	Not employed	
7) Month	ly family income	
a.	1,000- 10,000 ksh	
b.	11,000- 20,000 ksh	
с.	21,000- 30,000 ksh	

d. 30,000 ksh and above

Section B: Past Obstetric History

- 8) Do you have children
 - a. Yes
- 9) If yes, how many? ----- Female..... male.

10) Do you wish to have more children?

a. Yes

11) If yes, how many-----

12) When was your last delivery? Year----- Month...... Date......

13) What was the outcome of your last delivery?

a.	Alive	
b.	Dead	
c.	Miscarriage	

14) How soon do you plan to get pregnant again?

- a. In <1 year</td>

 b. In 1-2 years
- c. In 3 or <years

Section C: Level of Utilization of FP post OF repair

15) Are you aware of family planning methods?

a.	Yes	
b.	No	

16) If yes, which of the following family planning methods do you know? Tick all that

apply

- a. IUCD
- b. Pills
- c. Injectable
- d. Condoms
- e. Implant
- *f*. Tubal ligation

17) From where did you get information on the FP methods you know above? Tick all

that

- a. Radio
 b. Health provider
 c. Friends
 d. School
 e. Hospital facility
 f. Chief /Baraza/Church
- g. Others (specify)-----

18) Did you commence the FP after the OF repair?

a. Yes

b. No

19) If yes, what is your current FP Method?

a.	Intrauterine device	

- b. Pills
- c. injectable
- d. Condoms

e.	Implants	
f.	Tubal Ligation	

Section D: Patients Related Factors influencing utilization of FP services post OF repair

20) If yes in Q18, which of the following reasons made you to use FP services? Tick in the space provided the appropriate answer(s).

	Patients Related Factors	Tick in the
		space below
i.	Having knowledge and awareness on FP services	
i.	Having used FP before	
i.	Was counseled on the benefits of using family planning services post repair to include child spacing, prevention of the occurrence of, prevention of pregnancy, prevention of STIs and HIV/AIDS	
<i>.</i>	Husbands/Spouse support	

Section E: Health System Related Factors influencing utilization of FP services post OF repair

21) If No in Q18, which of the following reasons made you not to use FP services? Tick in the space provided the appropriate answer(s).

	Health System Related Factors	Tick in the spaces below
v.	Availability of facilities/equipment at KNH	
vi.	Accessibility of family planning service is a challenge	
vii.	Some of the healthcare providers are incompetent in their work	
viii.	Affordability of the family planning services	
ix.	Health workers' support and professional advice	
X.	Attitude of health workers towards women with post OF	
xi.	Difficulty in accessing health facility, no FP commodities, services and supplies. Non -available health providers	

22) Were you counseled on the importance of FP after OF repair?

- a) Yes
- b) No

23) If yes, what were you counseled on? Tick appropriate answer(s)

- a. Benefits of family planning
- b. Need to delay pregnancy for 6-12 months after repairs

c. Need to attend family planning clinic

d. Delay sexual intercourse for 6 months after repairs

e.	Attend ante natal clinic when pregnant	
f.	Next delivery should be by cesarean section	
g.	Cannot remember	

Thank you!

Appendix II: Key Informant Guide

1. What are the procedures for your repaired fistula clients to access family planning counseling and services?

2. Are the family planning services linked with the OF services under the same roof? If yes, are there any advantages to this?

3.Do you counsel repaired obstetric fistula patients before and after surgery on family planning services?

4. Kindly share some of the information provided to the clients during counseling?

5. What are the challenges faced by post OF repaired women in accessing FP services?

6. How do you think utilization of family planning services by repaired obstetric fistula women can be improved in the health facility?

Thank you!

Appendix III: Informed Consent

Title: Determinants of utilization of family planning among women post obstetric fistula repair in Kenyatta National Hospital, Nairobi County.

Introduction:

My name is Beatrice P. Oguttu, a Masters student at Jomo Kenyatta University of Agriculture and Technology (JKUAT). I hope that the information from this study will provide guidance to key stakeholders on how family planning can improve the care of women with obstetric fistula. The purpose of this consent form is to give you the information you will need to help you decide if you will be involved in the study.

Purpose of the study:

The aim of this study is to determine the utilization of family planning among women who have undergone obstetric fistula repairs at Kenyatta National Hospital. You are one of the participants chosen to be part of this study. The study will involve self-administered questionnaires in which your views about the purpose of the study are sought. If you decide to participate in this study, you will be asked several questions whose answers will be noted down on the questionnaire paper. Participation in the study will take your time but we will serve you as quickly as possible.

Benefits

There are no direct individual benefits but your participation in this study will help to inform and guide the policy makers, programme managers as well as other stakeholders on the approaches to be used in encouraging FP uptake post fistula repair. On the completion of the study, feedback will be handed over to the hospital administration in the form of a report.

Risks:

No risks are anticipated as a result of taking part in this exercise.

Voluntarism:

Your participation in this exercise is voluntary and you may refuse to participate or withdraw at any time without penalty or loss of benefits to which you are otherwise entitled.

Confidentiality:

No reference will be made in oral or written reports which could link you to any information collected and your name will not appear anywhere. Your identity as a participant will be kept confidential and information about you will be identified only by the study number and will not be linked to your name in any records. Data collected will be kept in a secure place.

You can ask any questions about the study. In case of further information on the study you can contact the following:

The Ethics and Research Committee

KNH-UON ERC Secretary,

Telephone: 2726300 ext 44102

Email: uonknh_erc@uonbi.ac.ke

Study participant's statement:

This study has been explained to me and I have had a chance to ask questions. I consent to take part in this study.

Participant's signature/ Thumb print......Date:Date:

Researcher's signature:Date:

Appendix IV: Kibali cha kushirikikatikauchunguzi

Utangulizi

Jina langu ni Beatirce P. Oguttu. Nasoma katika chou kikuu cha JKUAT. Ninakualika kushiriki utafitihuu.

Kuna maswali ambayo utaulizwa iwapo utakubalikushiriki. Utafiti huu utachukua muda wako kidogo, lakini tutajaribu kukuhudumia kwa haraka.

Lengo la utafiti

Lengo la utafiti huu nikubainisha utumizi wa njia za kupanga uzazi kati ya wahadhiriwa wa ugonjwa wa nasuri (fistula) baada ya kufanyiwa upasuaji ili kurekebisha tatizo hilo.

Faida

Kwa kukubali kushiriki utafiti huu, hakuna faida zozote inayokulenga wewe binafsi, ila itasaidia wahudumu wa afya na serikali kuchangia kuhimiza umuhimu wa kutumia njia za mpango wa uzazi baada ya matibabu ya fistula. Hii inalenga kusaidia kukinga kupata mimba tena kabla ya kupona vyema.

Athari

Hakuna athari zozote kwa kushiriki utafiti huu.

Kukubali

Kushiriki kwenye utafiti huu ni chaguo lako nasio wa lazima. Uko na uhuru wa kuwacha kushiriki wakati wowote upendavyo. Ikiwa utawacha kushiriki, haitabadilisha jinsi utakavyohudumiwa kwenye kliniki hii.

Siri

Maelezo yako itakuwa ya kisiri na hayatatolewa bila idhini yako. Jina lako halitaandikwa pahali popote kwenye utafiti huu, ila tutatumia nambari, ambayo ndiyo itatumika pia kutambua nakala yako ikiwa italazimu.

Iwapo uko na swali, unayo uhuru wa kuuliza. Na ikiwa pia utakuwa na swali au tashwishi baadaye, waweza kuwasilisha kwa nambari ifwatayo.....

The Ethics and Research Committee

KNH-UON ERC Secretary,

Telephone: 2726300 ext 44102

Email: <u>uonknh_erc@uonbi.ac.ke</u>

Kukubali

Nimesoma nakala hii ya kibali na pia nimeelezwa kinaga ubaga. Nimekielewa na bila kusurutishwa, ninakubali kushiriki kwenye utafiti huu.

Sahihi au kidole ya mshiriki.....

Tarehe

Sahihi ya mtafiti.....

Tarehe.....

Appendix V: Assent form for participant below 18 years (Minor)

I hereby confirm that the information about the study has been explained to me in a language that is clear. I fully understand the nature of the study and how I will participate in it. I fully understand that if I will agree to participate in the study, I will be asked questions which I will be expected to answer honestly to best of my knowledge. I understand that my participation in the study is voluntary and I am at liberty to withdraw from the study at any time. I am also aware that if I refuse to participate in the study, it will not affect the service I am receiving in this hospital. By agreeing to sign this form, I will be participating in the study.

I agree to participate in this study.

Signature/ Thumb Print

Date.....

Researcher's signature:

Date:

Appendix VI: Map of Study Area

