

Utilization Of Female Sterilization Among Women Aged 18-49 Years, In Tigoni Sub-County Hospital, Kiambu County.

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Abstract: Achieving the desired family size is not a difficult decision to make for a couple, female sterilization is not always the first choice of family planning to many couples. The purpose of study was to identify factors that determine the utilization of female sterilization among women aged 18-49 years in Mch/Fp Clinic, Tigoni sub-county hospital, In Kiambu County. Tigoni Sub-County statistics and trend shows the utilization of female sterilization is low compared to the other methods of contraception. A cross-sectional descriptive study design was conducted among 310 women randomly selected from Mch/Fp Clinic, Tigoni Sub- county Hospital. It was a descriptive cross-sectional study whereby quantitative methods of data collection was used. Data was collected using structured questionnaire, and quantitative data was analyzed using SPSS version 21. Relationships between variables were tested using chi-square test and logistic regression and a p-value of <0.05 was considered significant. There was significant statistical association between age and utilization of female sterilization (P=0.042) at 95% confidence interval. The study concluded that age and occupation had positive effect on utilization of Female sterilization. The factors with low and poor female sterilization use were: low level of knowledge about female sterilization; including lack of awareness on facilities providing female sterilization services, low literacy levels and extremes of parity with desire for more children. Others factors include religious prohibition and lack of spousal consent. In order to enhance the uptake of female sterilization as a bold step towards meeting the challenges envisaged in the Kenya's Vision 2030 and the realization of the SDGs, it is recommended that; sustainable education activities be established as early as possible for the clients including during the ante-natal period and also continuous medical education (CPd) sessions for the health care providers.

Index Terms – Contraceptive Methods, Cross-sectional Design, Family Planning, Female sterilization,

INTRODUCTION

Background to the Study

Family planning (FP) is an essential service to maternal and child health. Maternal child health areas have been focused on by developmental agencies especially concerning the performance of Millennium Development Goals (MDGs) 4 and 5. (UNFPA, 2010). In every ten women using contraception, about nine are on a modern form of contraceptives including female sterilization. Globally, Female sterilization is the more utilized than other methods of contraception among women of reproductive age. (UNITED NATIONS, 2013). Further studies have shown that with different types of contraceptives being utilized within different reproductive ages, indicates lack of limitation for the choice of family planning method, including female sterilization. (Sullivan et.al, 2006). The use of female sterilization decreased from 5.5 % in 1993 to 4.5% by the year 2003, (Noopur, and Sharma, 2009). Kenya has invested heavily in family planning programs including female sterilization; a lot of development has been put on manpower and structures where the National Council for Population Development Agency (NCPDA) and the Ministry of Planning and Economics and economics work together to ensure the Kenyan population is managed, With the aim of increasing contraceptive prevalence rate(CPR) and improving maternal and child indicators. Though improvement and the achievements have been minimal, the CPR of the country rose from 27-39 % between 1989 and 1998 and has since stalled. To date the national Contraceptive prevalence rate (CPR) stand at 58 % (KNBS, 2015).

Problem Statement

According to the KDHS of 2014, currently married women of reproductive age in Central region which holds the study population in Kiambu county, have a high Contraceptive prevalence rate (73 %) and has A low unmet need for contraception in the country at 8.8% (KNBS, 2010). In the KDHS 2014, Kiambu County was reported to have a Contraceptive Prevalence Rate 74% which is above the national average of 58% (KNBS, 2015). It becomes a concern when one or two methods account for more than 50% of the Contraceptive prevalence rate, even though an ideal method mix standard utilization does not exist (Sullivan, et. al 2006). Despite their effectiveness, utilization of long acting contraceptive methods including female sterilization is low in most sub Saharan Africa countries (Thoai et al, 2013). The study seeks to establish factors that influence client's utilization of female sterilization among women aged 18-49 years in Mch/Fp clinic, Tigoni Sub county Hospital, since this is least utilized in this institution.

Empirical Literature

General Client related Factors that influence the Uptake of Family Planning

According to the World Health Organization, the purposes of family planning is a voluntary thinking and living way which is based on attitudes, knowledge and rational decisions made by couples so as to prevent unwanted pregnancies. Family planning including female sterilization comes along with many benefits to the mother, children, father and the family at large. Different women have different perceptions of the family planning concepts including female sterilization and are influenced by different factors (Ackerson & Zielinski, 2017).

Family planning including female sterilization comes along with many benefits to the mother, children, father and the family at large. The mother is given sufficient time in regaining her health after the delivery, enables her to give attention and love her children and husband as they deserve and also helps her in her advancements which maybe career or personal growth. The father who may be the bread winner is able to provide for the family's basic needs and take good responsibility for the family. The children on the other side, when there is family planning they are provided for ample care attention and love as deserved.

With the different beliefs from the different religions, strict followers decisions and ability to use female sterilization as a method of family planning is affected and thus the religion determines their use of the different methods of family planning (Yeatman & Trinitapoli, 2010).

Different cultures and ethnicity believe that God is the giver of children and that he regulates the number of children that a family will have. This increases the fertility rate among the society which increases poverty levels in this region. It is therefore necessary to consider socio-cultural factors in campaigns towards the use female sterilization (Bakibinga et al., 2016; Khasakhala, 2011).

General Client Factors Influencing Uptake of Long-Term Methods

Long term family planning methods for example, Female sterilization refers to the use or application of methods that prevent individuals from getting pregnant for a more extended period if not permanently. Several factors influence the uptake of long term family planning methods, as opposed to the short term. Many parents prefer to concentrate on their firstborn child until they are grown enough before they think of getting a second child.

Another benefit is that the methods reversible where they give the parents the freedom to decide the period when they want to have the child and when they want (Bongaarts, Mauldin, & Phillips, 2016).

Another reason as to why clients prefer the female sterilization is because it offers protection against unplanned pregnancies for a more extended period. For example, a Intra uterine contraceptive device(IUCD) can be effective for 10 years (Cleland et al., 2017).

Socio-demographic Factors Determine the Utilization of Female Sterilization

A systematic review study by Olakunde et al. (2019) on uptake, facilitators and barriers female sterilization as a method of contraception among women of sub Saharan Africa reviewed articles published between the year 2017 and 2000. It obtained 48 articles whose analysis reviewed that there were individual factors that were barriers or facilitated uptake of female sterilization. The most common socio-demographic facilitator was achievement of desired family size.

In an attempt to understand the socio demographic characteristics of the acceptors of female sterilization in South West Nigeria, a retrospective analytical study was conducted for a period January 2012 to June 2013 followed by a cross-sectional study of 96 sterilized clients across various health centres in South West Nigeria. It was established that among the reasons given for accepting female sterilization as a method of contraception included completed family size (12.5%) while the rest reported that they had completed family size in addition to gynaecological and obstetrical issues.

Eeckhaut (2015) wanted to find out female sterilization patterns in the United States in relation to their marital status and other socio-demographic characteristics. A survival analysis was done using cross-sectional data from 2006-2010 National Survey of Family Growth which represented US civilian population of women aged 15-44 years. The survey established that female sterilization was not limited to women who were currently married. Besides, it was not limited to ever-married women suggesting that even those who have never been married were using it as a long term contraceptive of choice.

Socio-cultural Factors that Influence the Utilization of Female Sterilization

A cross-sectional study in Sub-Saharan Africa established that the barriers to uptake of female sterilization included myths and misconceptions that scared women regarding utilization of female sterilization. Besides, the fear of surgery and its complications was a major socio-cultural issues because female sterilization required an operation thought to be done in theatre. Other barriers mentioned included irreversibility of the procedure considering young women might change their family planning plans later in life and in that situation they would not have an option to remove the method. Additionally, there were religious teaching and beliefs that discouraged and prohibited use of female sterilization and use of contraceptive methods in general.

The decision to undergo female sterilization often involved male sex partners and their disapproval of the method greatly influenced uptake, a finding that was also reported by Adebimpe (2016). The study recommended adoption of health education strategies that aimed at minimizing socio-cultural issues that were barriers as well as promoting factors that would facilitate uptake of the female sterilization as a method of family planning.

Utilization of female sterilization has got no undesired effects (WHO/RHR, 2011). There was concern that female sterilization was believed to lead to menstrual irregularities, but other studies have shown that those women using female sterilization are not at a higher risk of getting the side effects than others, of getting menstrual irregularities. (Ripley F and Salem RM, 2012). Several studies have shown that with good communication among couples increased contraceptive use including female sterilization is likely to increase (Tumlinson et al, 2013; Gayen & Raeside, 2010).

Institution-Related Factors that Influence the Utilization of Female Sterilization

Among the institutional factors that were identified included poor health worker expertise and lack of equipment that is necessary to conduct female sterilization. However, there were some institutional factors that facilitated uptake of female sterilization such as subsidized cost of providing the service, task-sharing. Adebimpe (2016) argues that although health workers had generally high level of knowledge on female sterilization, their attitude and concerns towards the procedure were biased in a way that they had negative influence on the uptake of Female sterilization method in the community.

Another institutional factor is based on the performance of health professionals especially how they package information that they share with clients. A cross sectional study conducted in USA among 1154 physicians who offered female sterilization services revealed that physicians had different opinions regarding advising clients against female sterilization based on various client characteristics.

Ripley and Salem (2012) explains that additional barriers to accessibility of female sterilization include the publicity of facilities that provide it. For example, a hospital could be having the capacity to offer female sterilization but the public does not know thus limiting uptake of the method.

MATERIALS AND METHODOLOGY

Research Design

It was a cross-sectional descriptive study design which employed quantitative parameter which was done at Mch/Fp Clinic, Tigoni sub-county hospital, In Kiambu County.

Systematic random sampling method was used where the first respondent was the first client attended on the day of the interview. The Sampling interval was determined by dividing the approximated attendance for FP services for 3 months which was 897, (Total for the year 2016 was 3591. One month = $3591/12=299$, therefore $299*3=897$) by the sample size.

$$K=N/n$$

$$897/326=2.7=3$$

Every 3rd client was interviewed.

Sampled participants were interviewed after being assessed for their eligibility and informed consent obtained before being allowed to participate.

The fisher formula was used to determine the size of the sample (Mugenda & Mugenda, 2003)

n = the desired sample size, Z = the standard Normal deviation at 95% confidence level, and confidence interval (1.96). P = the proportion in the target population, q = $1-p$, d = the level of statistical significance set (0.05)

$$\text{Therefore } n = 1.962 \times (0.74) (0.26) / 0.052$$

$$n = 296.$$

The minimum required sample size was 296. However, allowing for 10% non-response the sample size was adjusted upwards to 326.

Data Collection Tool

A self-administered objective questionnaire was developed and used for the study. It was in English language as the service providers were conversant with that language and there was no need for translation to another language.

The pre-testing of the research tool was done in Kiambu Sub County Hospital in Kiambu County, using 10% (33) of the questionnaires.

Validity was determined during the pretesting and Research assistants were trained to ensure they are conversant with the tool. Enough literature review had been done for ideas on developing the tool.

Reliability was ascertained during the pre-testing, by administering the tool in an institution with similar characteristics before administering the tool to the participants.

Data management

Data was checked for completeness, cleaned and coded. Quantitative Data was entered into computer for analysis. Analysis was done using SPSS software version 20, and presented by use of Tables, Graphs, percentages and frequencies. Chi square was used to test the association between the dependent and independent variables. After entry, the data was crosschecked to ensure accuracy of the information obtained from the field then compared and validated using an in-built validation facility in Cs Pro. Analyzed information was cross checked with secondary data and glaring deviations or outliers observed addressed.

Ethical Consideration

Approval was sought from Mount Kenya University Ethics Review Committee, further approval was obtained from National Commission for science, Technology and Innovation.(NACOSTI) before execution. Tigoni Sub County Hospital research and ethics committee provided ethical clearance of the research before execution. Permission was also sought from the Head of the MCH/FP Clinic, where the Data was collected. The respondents of the study had to sign a consent form to indicate their voluntary participation in the study.

RESULTS AND DISCUSSION

Family Planning Methods

The study sought to find out all women who had ever used any methods of family planning.

Table 1: Ever use of Family Planning Methods

Variable		Frequency N=310	Percent (%)
Ever used contraception	Yes	271	87.4
	No	39	12.6
Long-term methods used	IUD	46	21.9
	Implants	149	71.0
	Sterilization	15	7.1
Short term methods used	Pills	112	86.2
	Condoms	18	13.8
	Injectable	173	100.0
Traditional methods used	Rhythm	2	66.7
	Withdrawal	1	33.3
Number of Children at First Use of Contraception	1-2 children	266	98.5
	3 and above	4	1.5

The study further sought on the intention to use female sterilization in future among the respondents.

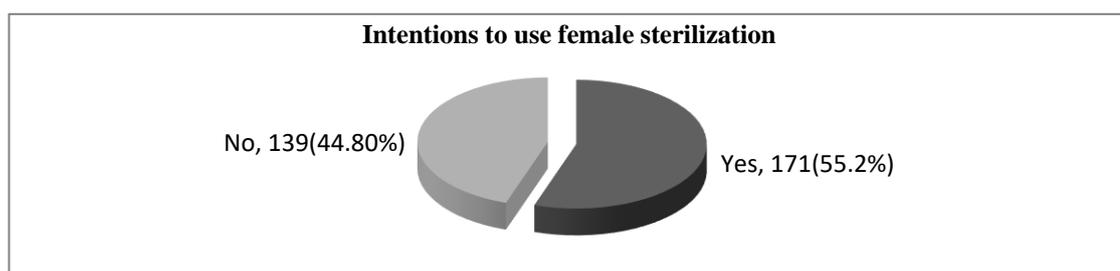


Figure 1: Future use Female Sterilization

The study sought from the respondents who did not intend to use female sterilization reasons were sought as to why

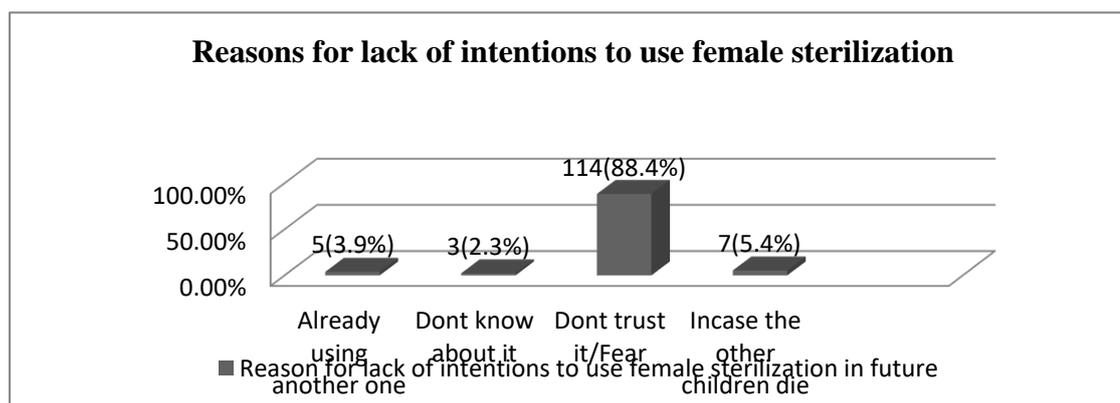


Figure 2: Reasons for lack of intentions to use female sterilization in future

The findings from the study indicated that female sterilization was the least utilized among the contraceptive methods. The results are in line with those from (KDHS, 2014) which showed that implants, injectable and pills were the most used methods compared to female sterilization.(KDHS, 2014). This finding is moderately extremely low contrasted and an examination in Tehuledre, Ethiopia found that female sanitization accounts practically 50% of all long acting and lasting strategies. (Tsui et al, 2010).

Social Cultural Factors

Table 2: Association between Socio Cultural factors and Utilization of Female Sterilization

Variable	Have you ever used Female sterilization as a method of family planning	P-Value

		No	Yes	
Agreed on number of children to get with spouse	Yes	121 99.2%	1 .8%	Fisher's Exact Test = 0.394
	No	188 100.0%	0 0.0%	
If agreed, the number	1-2 children	20 100.0%	0 0.0%	Fisher's Exact Test = 1.000
	3 and above	101 99.0%	1 1.0%	
Need For permission to attend FP clinic	Yes	65 100.0%	0 0.0%	Fisher's Exact Test = 1.000
	No	244 99.6%	1 .4%	
Need For permission from spouse to undergo female sterilization	Yes	172 99.4%	1 .6%	Fisher's Exact Test = 1.000
	No	137 100.0%	0 0.0%	

From the Table 2 above female sterilization utilization was not positively associated with agreement on number of children to get with the spouse (p=0.394), the number of children agreed (p=1.000), permission to attend FP clinic (p=1.000), and permission from spouse to undergo female sterilization (p=1.000).

Descriptive statistical analysis of frequencies and percentages shows that majority (60.6%) of respondents had not agreed on number of children to get with the spouse and those who have agreed majority (83.6%) indicated on 3 children and above. Reducing deliveries had great influence on fertility than child spacing. It is greatly beneficial to both women and society at large to avoid unwanted pregnancies by utilization of contraceptives including female sterilization. Concerning decision making in the family, majority of the respondents (66.5%) made decision together on the use of contraceptives, while 8% were mainly their partner's decision and 31% was mainly the user decision to use contraceptives. A total of 55.5% of respondents indicated they would require permission from spouse to undergo female sterilization as a method of contraception. Utilization of female sterilization is low due to lack of information and on availability and the cost involved.

A similar study in Malawi by Baschieri et al, (2013) revealed that women require permission from their spouses to use contraceptive. The polygamous men tended to be married to women who had not gone to primary school and who desired more children than monogamous couples and thus may reduce women's motivation to practice contraception

Institution Related Factors Influencing Utilization of Female Sterilization.

Factors that were examined to assess utilization of female sterilization were; knowledge of a hospital that offers female sterilization, charges for female sterilization, the waiting time between booking and having the procedure done, who does this procedure, and where is the procedure done.

Table 3: Association between Institutional Related Factors and Utilization of Female Sterilization

Variable		Have you ever used Female sterilization as a method of family planning		P-Value
		No	Yes	
Knowledge of a hospital that offers female sterilization	Yes	105 99.1%	1 .9%	Fisher's Exact Test = 0.342
	No	204 100.0%	0 0.0%	
Charges for female sterilization	Dont Know	200 99.5%	1 .5%	Fisher's Exact Test = 1.000
	Less than 1,000	5 100.0%	0 0.0%	
	Free	104 100.0%	0 0.0%	
Waiting time between booking and having the procedure done	Dont Know	292 99.7%	1 .3%	Fisher's Exact Test = 1.000
	Less than 1 hour	3 100.0%	0 0.0%	
	One Day	7 100.0%	0 0.0%	
	One Week	7 100.0%	0 0.0%	
Designation	Nurse	66 100.0%	0 0.0%	Fisher's Exact Test = 1.000
	Doctor	211 100.0%	1 0.0%	

		99.5%	.5%	
	Clinical Officer	11	0	
		100.0%	0.0%	
	Visitng team	21	0	
		100.0%	0.0%	
Department	Mch/Fp clinic	37	0	Fisher's Exact Test = 0.529
		100.0%	0.0%	
	Theatre	126	1	
		99.2%	.8%	
	Not sure	146	0	
		100.0%	0.0%	

From the Table 3 above female utilization was not positively associated with knowledge of a hospital that offers female sterilization ($P=0.342$), charges for female sterilization ($P=1.000$), the waiting time between booking and having the procedure done ($P=1.000$), who does this procedure ($P=1.000$), and where is the procedure done ($P=0.529$).

The awareness to female sterilization, which is measured as the knowledge about the family planning method was positively significant on contraceptive use in Mch/Fp clinic, Tigoni sub-County Hospital with more than half 55.2% of the respondents indicating they would use it in the future. The results shows the majority of the respondents 65.8% know of a hospital that offers female sterilization while more than two third 64.8% don't know the charges for female sterilization.

In a study done in Zimbabwe women were found to have no problem in recommending their chosen family planning method including female sterilization, to their friends or even kinsmen. (Mitchel MJ, 2004).

Multivariate Analysis of factors that determine utilization of Female Sterilization among women aged 18-49 years.

At bivariate analysis, female sterilization utilization at 95% confidence intervals (p -value <0.05) was significantly associated with the analysis of age and utilization of female sterilization ($p = 0.042$) at 95% confidence interval. There was statistical association between occupation and utilization of female sterilization ($P=0.035$). These factors were then fed into a logistic regression where they were not significantly associated with female sterilization utilization among women aged 18 to 49 years of reproductive age in Mch/Fp clinic, Tigoni sub-County Hospital and thus the null hypothesis is rejected.

Conclusion

The variables identified as the factors which had positive significant effect on contraceptive use were: On socio-demographic age of the women and women's occupation had positive significant. The main obstacle to the use of female sterilization was lack of knowledge and fear of surgery.

Though majority of married study participants had high knowhow on the overall permanent contraceptive methods, a huge number of married women had low knowledge specifically on female sterilization. The study findings indicate that female sterilization prevalence rate was very low below the national average compared to other family planning methods.

The social and economic factors that were found to influence the utilization of female sterilization among the respondents were, the level of education, occupation and increased knowledge on utilization of female sterilization.

Recommendations

In order to enhance the utilization of female sterilization are recommended:

- i. Establishment of sustainable Continuous Education sessions to improve utilization on female sterilization.
- ii. Development of information and educational materials about female sterilization and benefits to be used in the health facilities and in the community to raise awareness.
- iii. Community health workers need to make greater efforts to extend their services to include household level discussion on utilization of female sterilization.

Recommendations for Further Research

- i. Men were not included in this study, therefore there is need to target men and establish the role of men and how they influence utilization of female sterilization.

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