A CROSS-SECTIONAL STUDY OF FACTORS CONTRIBUTING TO LOW USE OF TUBAL LIGATION AMONG WOMEN ATTENDING FAMILY PLANNING SERVICES AT RUHOKO HEALTH CENTRE 1V, IBANDA DISTRICT.

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ABSTRACT

Background.
The purpose of this study was to identify the level of utilization of tubal ligation among women attending the MCH clinic at Ruhoko Health Centre IV Ibanda District and the factors that may influence the utilization of such contraceptive methods.

Methodology:
I carried out a cross-sectional study and I used a pretested questionnaire to collect data from 52 respondents. Collected data was entered into IBM SPSS 25.0 for data analysis chi-square test was done to determine factors associated with the use of ligation. Results were presented in tables and charts.

Results:
The study findings on socio-demographic factors found that the majority (75%) of respondents were aged >30 years, most (54%) of respondents reported that the distance to the health facility was too far for them and the prevalence of tubal ligation was low (32.7%). Factors associated with low use of tubal ligation were; the mother's age $\geq$ 30 years and a current number of children $\geq$4. i.e. (X2=10.71; p=0.001) and (X2=97.47; P=<0.001) respectively.

Conclusion:
The prevalence of tubal ligation uses among women attending the MCH clinic at Ruhoko Health Centre IV was low (32.7%) as compared to short-acting contraceptive methods (67.3%). Significant factors associated with the use of tubal ligation were women's age $\geq$ 30 years and parity $\geq$ 4.

Recommendation:
This study recommends that health workers in MCH and stakeholders should come up with ways to increase the utilization of tubal ligation methods of contraception among women < 30 years old and parity $\leq$ 3. Finally, more research should be done to ascertain the reason why the prevalence of tubal ligation is low.

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BACKGROUND OF THE STUDY.

Globally, 214 million women of reproductive age in developing countries who want to avoid pregnancy are not using a modern contraceptive method (MIT Solve,2023). This unmet need for contraception is too high and variation in different regions is observed. This inequity is fuelled by both a growing population, and a shortage of family planning services (Sawsan et.al 2012). In Africa, 24.2% of women of reproductive age have anuseet need for modern contraception. The 2016 Uganda Demographic and Health Survey (UDHS) report showed that there was a 28% and 32% unmet need for family planning among married and unmarried sexually active women respectively.

Unintended pregnancy remains an alarming global public health problem with its subsequent socioeconomic impact on individuals, families, and society and is responsible for 27% of maternal deaths and 44% in Botswana highlighting the need for effective contraceptive utilization 2. Despite the great effectiveness of female sterilization for women who do not want to have more children, female sterilization uptake in Uganda is very low. By reducing rates of unintended pregnancies, family planning also reduces the need for unsafe abortion (Aeon Aesthetics and Gynaeco). The Uganda Ministry of Health and its private partner's campaign for the use of long-acting contraceptive methods, however, the contraceptive method mix is dominated by short-term methods like pills and Injectables. Worldwide, Unintended pregnancy remains an alarming global public health concern with its subsequent socioeconomic impact on individuals, families, and society. over time female sterilization has not kept pace with that of the short-acting methods such as oral (pills) and injectable and hence the

reasons for its low uptake are. world Health Organization. family planning allows people to attain the desired number of children and determine the spacing of pregnancy. (Arifiana, R. et al ,2018).

In Africa, women have opted for reversible contraceptives which are temporal methods of the family which seem to have a high risk of getting unwanted pregnancies, which are leading to unsafe abortions, death and disrespect, family riots, and school dropouts among adolescents. It was also noted that unsafe abortion has several consequences which include morbidity, mortality, and disability as well as economic consequences to the woman and her immediate family. In Sub-Saharan Africa, tubal ligation is largely performed surgically. Nonsurgical approaches may be more acceptable to women who do not desire surgical procedures. Since this method of contraception is a permanent form of female surgical contraception, even if counseling is adequate, there remains a risk of regret after tubal ligation. the CREST study found a cumulative probability of regret of 12.7% over 14 years. (Health Direct, 2022) In East Africa, according to an economic survey report released by the Kenya National Bureau of Statistics on Thursday, the number of women undergoing tubal ligation decreased to 3,616 in 2021 from 4,435 in 2020 (SAYA, 2022).In Uganda, fear of using tubal ligation among women attending family planning health care services due to its related negative side effects like Heavy and painful menstrual periods., Body pains and strains that are unexplained, mood swings that are much worse as compared to PMS, headaches, unexplained sweats, weight gain that is not alleviated by diet and exercising flaking, dry and itchy skin, hair that is brittle and dry, while thinning and might fall out within clumps, anxiety, hopelessness, marital issues, impotency, and depression

In Uganda, women are reported to have different perceptions towards the utilization of tubal ligation. Some women regret their decision to receive a tubal ligation, others may. Some factors that can influence this feeling of regret in women include being young at the time of the procedure, often being age 30 counseling, and unforeseen life events such as a new spouse or a child's death. (Nccrm, 2018).

Purpose of the study.

- *To determine the factors that contributed to the low use of tubal ligation among women attending family planning services at Ruhoko Health Centre IV, Ibanda district.*

Specific objectives.

- *To determine the socio-demographic factors that contributed to the low use of tubal ligation among women attending family planning services at Ruhoko Health Centre IV, Ibanda district.*
- *To determine Health facility-related factors that contributed to the low use of tubal ligation among women attending family planning services at Ruhoko Health Centre IV, Ibanda district.*
- *To find out individual factors contributing to the low use of tubal ligation among women attending family planning services at Ruhoko Health Centre IV, Ibanda district.*

METHODOLOGY.

Study Design.

We used a cross-sectional design using a quantitative, method. It was descriptive because exposure and outcome variables were determined simultaneously. We had limited time to follow up on regrets.

Study Area.

The study was conducted while at Ruhoko Health Centre IV, Ibanda district. The research study was carried out between October 2022 and February 2023. This is because it was the period designated by the school for third-year students to carry out their research.

Study Population.

The study population involved women in the reproductive age brackets of 21 – 45 years and health workers.

Sampling technique.

The researcher used a simple random sampling technique on women. This helped to save time.

Purposive sampling technique.

The researcher used a purposive sampling technique to select health workers found in Ruhoko Health Centre IV, Ibanda district. This sampling technique is appropriate for a small population.

Sampling Technique.

A simple random sampling technique was used because, in random sampling, each member of the population study is equally likely to be chosen as part of the sample. There was no bias in selection procedures thus positive results in a representative sample.

Sampling procedure.

A convenient sampling procedure was used to select respondents from family planning, based on "first come first serve ", whereby a woman who came early consented to participate.

Data Collection methods.

Questionnaire survey.

Data was collected using a researcher-administered questionnaire. This was based on the assumption that they might not be comfortable reading and writing in the English language; therefore, the researcher was asked the questions. It was comprised of both open and closed-ended questions. Closed-ended questions were utilized to obtain short, specific answers while open-ended questions were used to collect data that required reasoning from respondent.

Interview method.

The interview was the method of collecting data using a document containing questions that helped the researcher get immediate feedback from the respondents at the time of data collection. This was used to get information from the community members who were the key informants in the study. Therefore, the researcher took his time and arranged a face-to-face interview with the health workers. This was through asking questions that needed immediate answers to help in saving time and smooth running of the activities taking place. Probing was also used to get in-depth information.

Data collection tools.

Questionnaires.

Data was collected using a researcher-administered questionnaire. This was based on the assumption that they might not be comfortable reading and writing in the English language; therefore, the researcher was asked the questions. It comprised both open and closed-ended questions. Closed-ended questions were utilized to obtain short, specific answers while open-ended questions were in case the local leaders and health workers were required to give elaborate answers.

Interview guide.

An interview guide is a document containing questions that help the researcher get immediate feedback from respondents at the time of data collection. This was used to get information from the community members who were the key informants in the study. Therefore, the researcher took his time and arranged a face-to-face interview with the community members as some might be unable to read and write. This was through asking questions that needed immediate answers to help in saving time and smooth running of the activities taking place. Probing was also used to get in-depth information.

Research proposal.

Data from both the primary and secondary respondents was obtained through a formal interview and by use of questionnaires. That from the primary respondents were obtained using a researcher-administered questionnaire, based on the assumption that they might not be able or comfortable reading and writing in the English language. Therefore, the researcher was trained on data collection steps and how to ask the questions as they noted down the responses. This has been done in a quiet comfortable place that allows confidentially to all the respondents to open up.

Dependent variables.

Tubal ligation among women attending family planning.

Independent Variables.

The factors affecting utilization, and regretors included; socio-demographic factors, client-related factors, and health-related factors.

Quality Control.

This was done to ensure consistency and reliability of results. The questionnaire was pretested in different environments but with similar characteristics to the study participants.

RESULTS.

Socio-demographic factors contributing to the low use of tubal ligation among women attending family planning at Ruhoko Health Centre IV, Ibanda district.

The validity.

According to (Middleton, 2023), validity refers to how accurately a method measures what it is intended to measure. This means that it produces results that correspond to the real property, characteristics, and variations in the physical or social world.

Liability.

Refers to a system of insurance where the injured student can successfully claim to have counted as a university or faculty start-up employee during exposure, the students were able to bring a claim for workers' compensation-provided, of course, that the university or faculty business in question is properly covered.

Data Analysis and presentation.

Data in this study was analyzed using SPSS and Microsoft Excel to calculate percentages, mean, and standard deviation. Data was presented using pie charts, graphs, and frequency tables. This involved the processing of data which was represented in the table and graphs.

Ethical Consideration.

An introductory letter from the principal tutor clinical medicine department of KSHS will be issued and taken to the authorities of Ruhoko Health Centre IV, Ibanda district to seek consent to carry out a study in their area. Informed consent to participate voluntarily in the study with confidentiality and privacy was ensured and no disclosure of any participant's information to another respondent. Also, participants were allowed to withdraw from the study at any time.

Piloting the study.

The study was piloted one month before the large-scale data collection. This involves the researcher randomly picking 5 respondents in the study area to answer the questions from the questionnaire. The purpose of piloting is to investigate whether crucial components of the main components were feasible.

Inclusion criteria.
The inclusion criteria are all women aged 28-45 years.

Exclusion criteria.

The exclusion criteria are all women aged below 28 and those above 45 years.

Table 1: Shows the distribution of respondents according to their bio-data. (N=52)

Variable	Frequency (f)	Percentage (%)
Age		
18-29	13	25
30-above	39	75
Total	52	100.0
Marital status		
Married	32	61.6
Single mothers	9	17.3
Divorced	6	11.5
Widowed	5	9.6
Total	52	100.0
Occupation		
Self employed	23	44.2
Employed	16	30.8
Unemployed	13	25.0
Total	52	100.0
Level of education		
Never went to school	6	11.5
Primary level	19	36.5
Secondary level	17	32.7
Tertiary /University level	10	19.3
Total	52	100.0
Tribe		
Muganda	16	30.8
Munyarwanda	13	25.0
Munyankore	8	15.3
Others	15	28.9
Total	52	100.0
Number of children they had		
Zero child	8	15.4
One child	20	38.5
Two children	16	30.8
Three children and more	8	15.3
Total	52	100.0

From table 1 the most (75%) of the respondents were aged 30 and above years and theleast (25%) were aged18-29years.

Secondly, the study findings showed that most of the respondents (36.5%) had attainedprimary level education whereas the least (11.5%) had never attained any level of education

From the study findings, most (61.6) of women who attended tubal ligation were marriedwhile the least (9.6%) were widowed.

It's also noted that, most (44.2%) of women who attended tubal ligation were self-employedwhile at least (25%) of the respondents were unemployed.

The health facility related factors contributing to low use of tubal ligation amongwomen attending family planning services at Ruhoko Health Centre iv, Ibanda, district.

Figure 1: Shows the distribution of the respondents according to the distance of the health facility.(N=52)
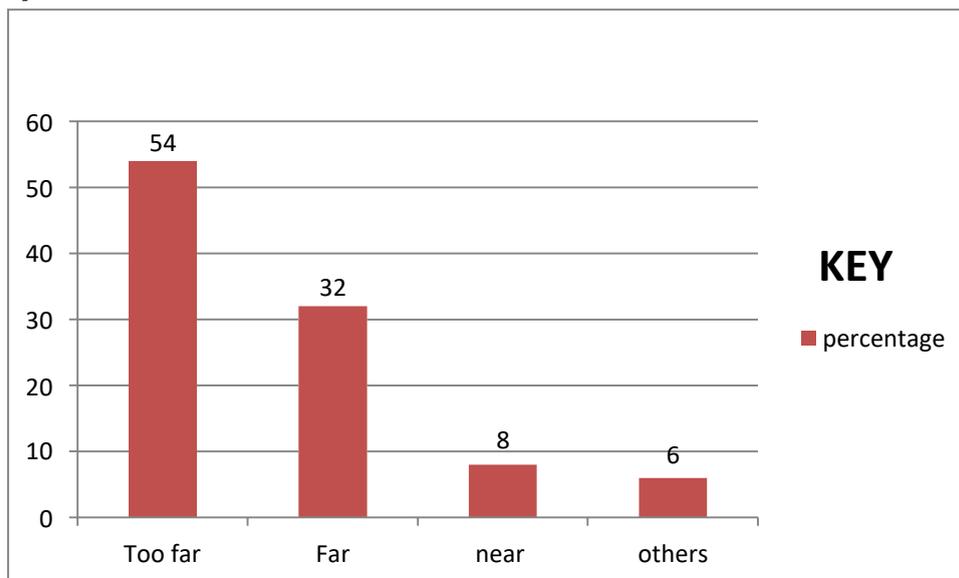
From figure 1, majority of the respondents (54%) said that the distance to the health facility was too far while minority (6%), others said that the distance was fair.

Table 2: Shows the distribution of the respondents according to their knowledge abouttubal ligation as a method of family planning, (N=52).

Respondents	Frequency (f)	Percentage (%)
Tubal ligation	11	21.1
I don't know	25	48.1
Others	16	30.8
Total	52	100

The Majority of the respondents (48.1%) used short term methods of contraception while few(21.1%) knew about tubal ligation.

Table 3: Shows the distribution of respondents according to the means of transport usedto the health center when going for tubal ligation services.

(N=52)

Responses	Frequency (f)	Percentages (%)
On foot	26	50.0
In vehicles	9	17.3
Motorcycles	6	11.5
Bicycles	11	21.2
Total	52	100

From table 3, majority of the respondents (50%) used foot as the mean of transport where as the least (11.5%) used motorcycles.

Table 4: Shows the attitudes of health workers towards clients when attendingtubal ligation services. (N=52)

Responses	Frequency (f)	Percentage (%)
Health workers are harsh	8	15.4
Have negative attitude	26	50.0
They are lazy	6	11.5
Welcoming	12	23.1
Total	52	100

From table 4, most of the health workers (50%) have a negative attitude towards the practice whereas few health workers (11.5%) are very lazy towards tubal ligation.

Figure 2: shows the availability of health workers at the facility.

(N=52)
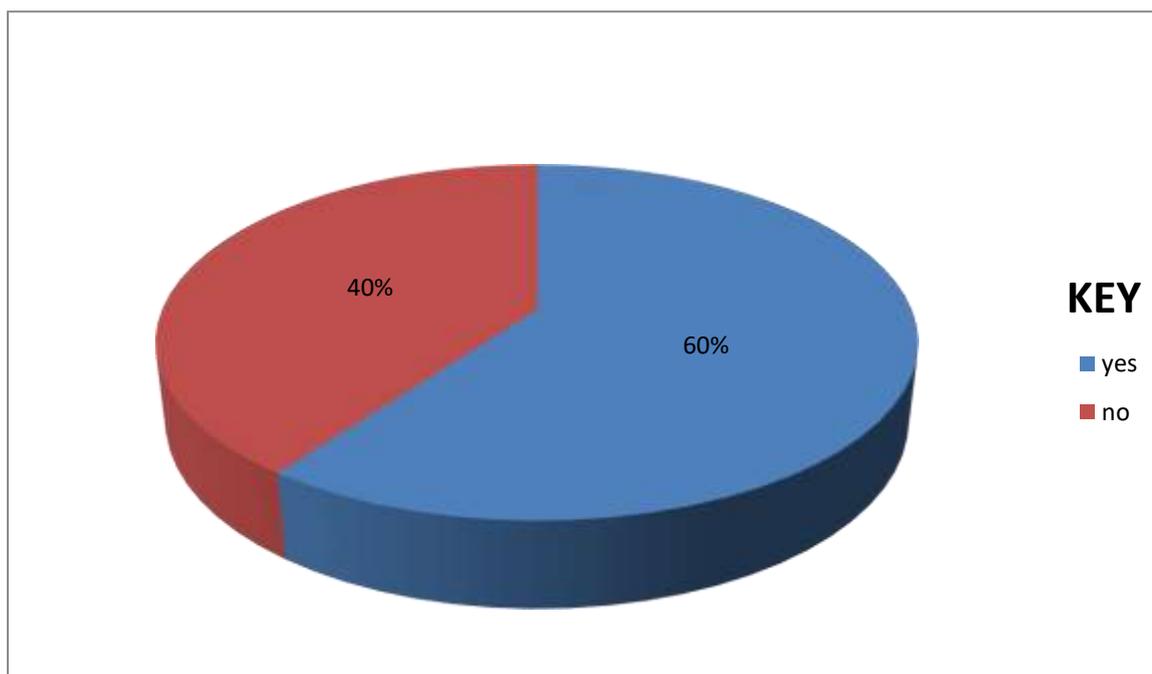
From the study findings majority (60%) of the respondents found health workers at the facility while minority (40%) did not find health workers.

Table 5: Shows the prevalence of the use of tubal ligation among women attendingfamily planning services at Ruhoko Health Centre IV, Ibanda district.

(N=52)

Response	Frequency (f)	Percentage (%)
Yes	17	32.7
No	35	67.3
Total	52	100

From table 5, less than half of the respondents (32.7%) use tubal ligation as a contraceptive method of controlling un wanted pregnancy whereas the majority of the respondents (67.3%) say that they are using other methods of contraception.

Client factors contributing to the low use of tubal ligation among women attending family planning services at Ruhoko Health Centre IV, Ibanda district.

Table 6: Relationship between demographic characteristics and use tubal ligation

(N=52)

Variables		Tubal ligation			Chi square	P value
		NO	YES	Total	x^2	
Age group	≤29	30(88.2%)	4(11.8%)	34(100.0%)	10.71	0.001
	≥30	8(44.4%)	10(55.6%)	18(100.0%)		
Occupation	House wife	23(76.7%)	7(23.3%)	30(100.0%)	1.26	0.534
	Employed	8(72.7%)	3(27.3%)	11(100.0%)		
	Business	7(63.6%)	4(36.4%)	11(100.0%)		
Religion	Catholic	14(70.0%)	6(30.0%)	20(100.0%)		
	Protestant	8(80.0%)	2(20.0%)	10(100.0%)	3.92	0.270
	Muslim	5(71.4%)	2(28.6%)	7(100.0%)		
	Pentecostal	11(73.3%)	4(26.7%)	15(100.0%)		
Educational level	Non	7(75.0%)	3(25.0)	10(100.0)		
	Primary	20(66.7%)	10(33.3%)	30(100.0%)	2.109	0.324
	Secondary	9(75.0%)	3(25.0%)	12(100.0%)		

Only age was found significant (X^2=10.71; p=0.001) among the demographic variables

Relationship of tubal ligation use and current number of children

Table 7: Relationship of tubal ligation use and current number of children (N=52)

Variables		Tubal ligation		Total	Chi square	P value
		No	Yes		(X²)	
Current number of children	≤3	37 (94.9%)	2(5.1%)	39 (100.0%)		
	≥4	1 (7.7%)	12(92.3%)	13(100.0%)	97.47	<0.001
Total		38 (73.1%)	14 (26.9%)	52 (100.0%)		

The results show that current number of children the woman have is statistically significant $(X^2=97.47; P=<0.001)$.

**Relationship of tubal ligation use and discussion of FP with partner**

Table 8: Relationship of tubal ligation use and discussion of FP with partner

(N=52)

Variable		Tubal ligation		Total
		No	Yes	
Discussion with partner aboutFP	No	8(72.7%)	3(27.3%)	11(100.0%)
	Yes	30 (73.2%)	11(26.8%)	41(100.0)
Total		38 (73.1%)	14 (26.9%)	52(100.0%)

From table 8, of the 11 women who did not use tubal ligation,27.3% of their partners knew about tubal ligation while 72.7% had no idea. While of the 41 women who said yes to tubal ligation,26.8% of their partners knew about tubal ligation and 73.1% were not aware.

Figure 3: shows the prevalence of tubal ligation in patients attending family planning services in Ruhoko Health Center IV Ibanda District. (N=52)
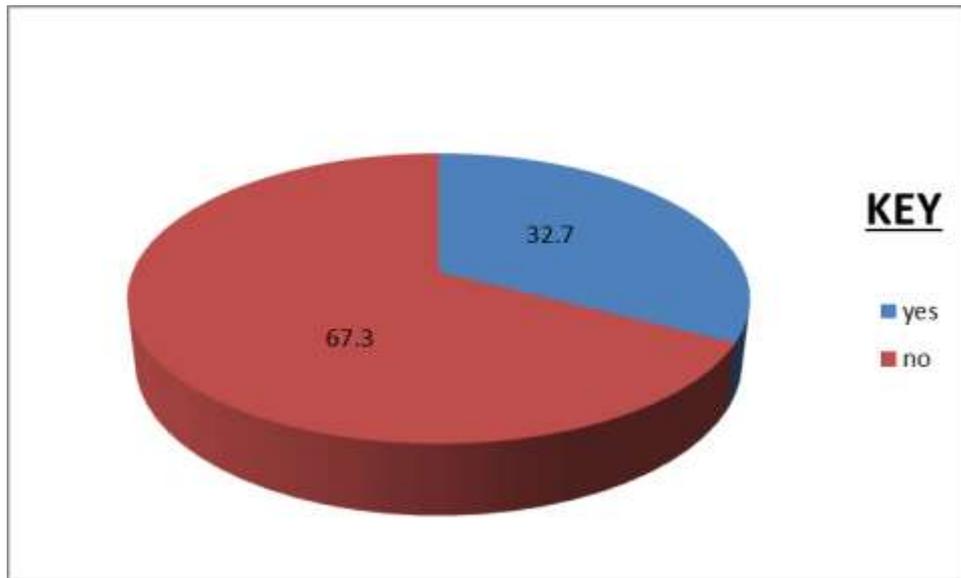
Results showed that less than half (32.7%) of the respondents were using tubal ligation whilebigger than half (67.3%) of the respondents used other family planning method.

DISCUSSION.

Socio-demographic factors contributing to the low use of tubal ligation among women attending family planning at Ruhoko Health Centre IV, Ibanda district.

According to the study findings, majority (75%) of the respondents were aged >30years. This is in agreement with the study done by the 2016 Uganda Demographic and Health Survey (UDHS). They analyzed all (18,506) women aged 15-49 years in the UDHS. Secondly, according to the study finding, most (36.5%) of the respondents had attained primary level education. This is in disagreement with a study done on Uptake of permanent contraception among women in sub-Saharan Africa: a literature review of barriers and facilitators which showed that higher levels of education tend to positively affect health seeking behaviors, and education may increase a woman's control over her pregnancy (KIM, S. I. (2017).

The health facility related factors contributing to low use of tubal ligation among women attending family planning services at Ruhoko health Centre 1V, Ibanda, district

According to the study findings, most (54%) of the respondents said that the distance to the health facility was too far. This is in agreement with a study carried out in Tanzania (Keogh et al., 2015) which reported that 60% of the respondents were not using long acting contraception methods because they could not get them in the nearby

older women and those with large number of children

health facility unless they walk a long distance 26 In addition to that, most (48.1%) of the respondents used short term methods of contraception. This is in agreement with the study done by. (KAMAL, 2018) which showed that majority (73.1%) were using short acting methods. Finally, according to the study findings from the healthy facility, less than half of the respondents(32.7%) use tubal ligation as a contraceptive method of controlling un wanted pregnancy this is in agreement with the study on (factors influencing utilization of long acting contraceptive methods, 2018) done by (KAMAL, 2018) where 26% used tubal ligation.

Client Factors influencing utilization of tubal ligation as a contraceptive method.

The variables which were found significant were; mother's age ($X2=10.71$; $p=0.001$) and
current number of children ($X2 =97.47$; $P=<0.001$). Furthermore, it is noted that age specific tubal ligation prevalence rate increase with age of women

Most (55.6%) of women who were using tubal ligation were ≥30 years compared to those ≤29 years old. This may be attributed to; age associated with experience in child birth which may come with access to health education about contraception, old age may be associated with increasing needs from large family which puts economic pressure thus need to limit or control child birth. Also, many women reject contraception because bearing and raising children is the path to respect and dignity (Ajong et al., 2016). As aforementioned, a high number of children comes with a cost, not only for feeding but also healthcare and education. The driving force towards use of LACM in
could be due to the desire for limiting the number of

children in the face of an advancing age.

CONCLUSION.

Majority (75%) of the respondents were aged >30years. Age and number of children has been reported by other studies to influence use of contraception. Most (54%) of the respondents said that the distance to the health facility was too far, and this contributed to the decreased prevalence of tubal ligation.

Client factors which were found significant were; mother's age (X^2=10.71; p=0.001) and current number of children (X^2 =97.47; P=<0.001).

However, the level of education was found to negatively influence tubal ligation at higher levels.

Generally, the prevalence of Tubal ligation uses among women attending MCH clinic at Ruhoko Health Centre IV, Ibanda district was low (32.7%) as compared to short acting contraceptive methods (67.3%), and is significantly associated with age above thirty (30) and parity equal to or greater than 4 children.

RECOMMENDATION.

Ministry of health should be recommended to establish more health centers. This reduces thedistance to the health facility.

This study recommends that, health workers in MCH and stakeholders should come up with strategies to encourage women <30 years old and those with parity of ≤3 about the benefits ofusing Tubal ligation method and encourage the its use so as to increase the prevalence. The reproductive health implication of these findings suggests a targeted intervention such as health education and patient-specific counselling to create awareness on the benefits of tubal ligation. Also, more research is needed to ascertain the reason for low utilization of Tubal ligation method among women of age <30 and ≤ 3.

ACKNOWLEDGEMENT

LIST OF ABBREVIATION AND ACRONYMS

B T L	:	Bilateral Tubal Ligation
C P R	:	Contraceptive Prevalence Rate
F P	:	Family Planning
H C P	:	Health Care Provider
H C	:	Health Center
H M I S	:	Health Management Information System
I U C D	:	Intra Uterine Contraceptive
KSHS	:	Kampala school of health sciences.
L A M P	:	Long Term and Permanent Methods of Family Planning
L A R C	:	Long Acting and Reversible Contraceptives
M E C	:	Medical Eligibility Criteria
M O H	:	Ministry of Health
O P D	:	Out Patient Department
S D P	:	Service Delivery Point
T F R	:	Total Fertility Rate
U D H S	:	Uganda Demographic Health Survey
U N B S	:	Uganda National Bureau of Statistics
U N P A	:	Uganda National Family Planning Association
U S	:	United Nations
W H O	:	World Health Organization

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