Prevalence and Factors associated with Family Planning in the Face of COVID-19 among women of Reproductive age in a Rural Town Council in Eastern Uganda. Cross sectional study.

ABSTRACT

Aim: This study aimed to assess the Family Planning Prevalence and Factors associated with Family Planning in face of COVID-19, among women of reproductive age in rural town council in Amuria district, Eastern Uganda. Little evidence exists of the factors associated with family planning use in face of COVID-19 in resource limited settings in Eastern Uganda. Our findings will close this apparent research gap and inform national and district Family planning guidelines and policies**.**

Materials and Methods

We used a quantitative research approach and cross sectional design to determine prevalence and factors associated with family planning use, among women of reproductive age in the face of Covid-19 in Amuria Town council in Uganda. The respondents for the study were chosen using purposive sampling technique. We used questionnaires to collect data from study participants. Quantitative data was compiled and fed into the computer using Microsoft Excel and then exported to Stata 15.

Results: The Prevalence was at 17.1% lower than the national target of 50**%.** 58.4% of our women were not using family planning because of the anticipated side effects. 50% those using family planning completed ordinary level education. The married women were 0.2 times less likely to use family planning. Single ladies were 4.6 times more likely to use family planning as compared to widowed, divorced and married.

Conclusion: The prevalence of Family planning in Amuria Town Council was 17.1% much lower than the National Target. Being married and low level of education was associated with low uptake of Family planning in context of COVID-19. Family planning programs should put more focus on the married women and involve their husbands in implementation of their programs.

Key words: Family planning: married women; COVID-19; Eastern Uganda

INTRODUCTION

Worldwide it is estimated that 222 million women have unmet need for Family Planning [1]. Family planning allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births[2]. It is achieved through use of contraceptive methods and the treatment of involuntary infertility. Among the major benefits of a woman's ability to space and limit pregnancies is a direct impact on their health and well-being as well as outcome of pregnancies. Contraceptive methods can be modern or traditional; modern contraceptive methods include pills, depot implants ,sterilization, Vasectomy use of condoms, Intra uterine devices, Lactational Amenorrhea method and emergency contraception[3].Traditional methods include periodic abstinence and withdrawal.

Use of Family Planning can contribute to a substantial reduction in fertility and reduce the proportion of unwanted pregnancies as well as maternal deaths that would otherwise occur in the absence of contraception. In both developed and developing countries, the proportion of women who use contraception has increased over the last two decades. In 2019, 63% of women aged 15 to 49 used some form of contraception, with 58% using a modern contraception method. This has increased women's opportunities to choose when and how many children they want to have, which can benefit not only their right to health, but also their rights to an adequate standard of living, among other human rights[4]. According to studies its known that, meeting all women's contraceptive needs in developing countries more than pays for itself; for every dollar spent on contraception, four dollars are saved[5].

Corona virus disease 2019 (COVID-19) is respiratory illness that can spread from person to person, its caused by novel virus that was first identified in Wuhan, China [6] . The virus is thought to spread when people are in close contact (within 6 feet) through respiratory droplets produced when an infected person coughs or sneezes (4 AA). On 18-3-2020 H.E the president of Uganda declared COVID-19 national emergency and has since issued guidelines on preventive measures to prevent spread of COVID-19 in Uganda. Some of the preventive measures instituted by the president included lockdowns, which limited public movement, hence affecting access to health services like Family planning. This is in accord with WHO (2022) pulse survey report that

reported some 59% of countries had partial disruptions and 9% had severe disruptions in family planning use and contraceptive prevalence. UNFPA (2022) noted that 12 million women may have been unable to access family planning as result of the COVID-19 pandemic.

In Uganda, the TFR is 5.4 children per woman (UDHS 2016). However, there is a significant disparity between regions, with TFR ranging from 3.5 children per woman in the Kampala region to 7.9 children per woman in the Karamoja region. It should be noted that the region with the highest TFR also has the highest levels of poverty. To increase the use of family planning, it is necessary to first understand the key drivers of high fertility rates and then to develop culturally appropriate family planning messages. Uganda has one of the world's most youthful populations, with slightly more than half of its population under the age of 15[5].

It is estimated that simply spacing births and having access to FP methods can reduce maternal mortality by 30% and child mortality by 20%. With less than 40% of women of reproductive age in Uganda are using modern contraception, there is a critical need for community-based FP education and services [7]. The Uganda National Development Plan (NDP) II recognizes FP as a critical and integral factor in poverty reduction by promoting the realization of a demographic dividend, which is required for Uganda to achieve middle-income status by 2040 [8].

The need and demand for FP among married women and sexually active women is high, with the Teso region having the greatest unmet need. In comparison to other areas, the Teso sub-region has the highest rate of teenage pregnancies at 26.2 percent. Regional differences exist, with the Teso region having the highest proportion of adolescents who have begun childbearing.[9]

Ethnicity is also found to be a significant factor as results showed that Teso region was among those less likely to use FP as a method of birth control[10]

Only 51% of the health facilities in this district offer modern FP services, with 34.7% for child spacing while 22.1% demand to limit child bearing [9] . An average of about 20% of the women have tried to use these methods (Amuria HFR 2018) and this has greatly led to increasing population within Amuria TC. According to the health facility records, there has been a decreasing trend on the use of FP from 1314 in 2015/16 to 572 in 2018/19 FY which has led to increasing population and total births from 1386 in 2016/17 to 2059 in 2018/19. Generally,

Amuria TC has a high fertility rate of 5.7 children per woman, with a high rate of teenage pregnancies.

Although previous studies have pointed out the main barriers or factors associated with Family planning, little evidence exists of the factors associated with Family planning in the face of COVID-19 in resource –limited settings in Eastern Uganda. There are virtually no studies that have looked at Prevalence and associated factors of Family planning in face of COVID-19 among women of reproductive age in Amuria district. Amuria district health reports as noted above indicate decline in the utilization of Family planning methods. Current evidence suggest that COVID-19 disrupts family planning utilization and based on the above we conducted a study to assess the prevalence and factors associated with family planning use among women of reproductive age in face of COVID-19 in Amuria Town council, Eastern Uganda.

2. METHODOLOGY

2.1 Study site and design

This study employed a cross sectional quantitative research approach to explore factors affecting family planning among women of child bearing age in the face of Covid-19 in Amuria TC in Uganda. Amuria TC is located in Eastern region of Uganda with an elevation of 1,115 meters. Amuria Town Council is situated Northeast of Abiya and Southeast of Okutoi.It is the administrative, commercial, and municipal capital of Amuria District, in the Teso sub-region. Amuria TC comprises of four wards namely; Eastern, Akisim, Alira and Okutoi. It has a population of 8,900 people (2020) projection, of which 4,500(50.6%) are male and 4,400(49.4%) are female.Amuria TC harbors Amuria district hospital(Amuria HCIV which was upgraded to hospital) According to the Ugandan Ministry of Health, health center four is headed by a medical doctor and provides surgical services in addition to those provided by health center three(MOH Health Strategic plan 2000).Amuria HC IV currently has an inpatient bed capacity of 69 beds and is in position to handle several cases. Amuria HC IV currently holds the Health SubDistrict (HSD) headquarters and serves 8 sub counties (Wera, Asamuk, Kuju, Apeduru, Wila, Akoromit, Abirela and Amuria TC) with a catchment population of 24,379 people of whom 4,924 are women of child bearing age (WCBA), 11,214 are children under 15 years of age, 4,924 are children under 5 years and 1,048 are children under 1 year of age

2.2 Study population and sampling procedure

The study focused on women of reproductive age who lived in Amuria TC. The respondents for the study were chosen using purposive sampling technique. This is due to the fact that the study only included women of childbearing age. A stratified sampling strategy was employed in each ward to divide the women into four groups based on their marital status, age differences, and distance to health facilities. These are essential variables in assessment of family planning uptake. The strata were employed during the sampling phase to guarantee that each group accommodated the heterogeneity of the sub populations

Individuals satisfying the established inclusion criteria were chosen from suitable households identified by Local Council 1 chairpersons from the respective cells. Village Health Team (VHT) members also assisted in the identification of possible study participants in the selected households and the establishment of trust between the researchers and the study participants.

The survey included women aged 15 to 49 years old who lived in rural areas and were capable of expressing themselves on the matter at hand.

2.3 Data collection and management

We used questionnaires to collect data from study participants. The questionnaires were written in English and translated in Ateso (local language) to ease understanding among the participants. The questionnaires were given out by the researcher to only the willing respondents after they had read and understood the terms and conditions and had signed the consent forms.Prior to the distribution of the questionnaires, researchers explained the purpose of the study and the main objectives of the sessions to the participants. The researcher also guided the respondents on how to fill the questions for accurate collections. Face to face interviews were also conducted between the researcher and the study participants. Here, the researcher directly communicated to the participants on a one on one basis and asked questions related to the study so as to reduce non-response and improve the quality of the data collected. In addition, researchers and participants established ground rules for interviews, such as effective participation, speaking one at a time, and respect for the perspectives of each another. Each interview lasted 60 to 90 minutes. The interviews were held at the participants' convenience to make it easier for them to attend.

2.4 Data analysis

Quantitative data was compiled and fed into the computer using Microsoft Excel and then exported to Stata 15. The data was then analyzed using Stata 15 at three levels. At the univariate level of analysis, descriptive statistics (frequencies and percentages) were presented, at bivariate level, relationships and assessment of behavior between variables that were highly correlated was done. For graphic presentation of findings, the Microsoft Excel was used to produce the graphics.

2. 5 Calculation of the sample size population

The sample size was determined using fisher's formula as shown below.

$$n = \frac{z^2 pq}{d^2}$$

where: n=Desired Sample size

Z=linked to 95% confidence interval (used 1.96)

P=Proportion of women in reproductive age

q=1-P

d= is the proportion of error the researcher is able to accept.

3. RESULTS

3.1 Participants Socio-demographic Characteristics.

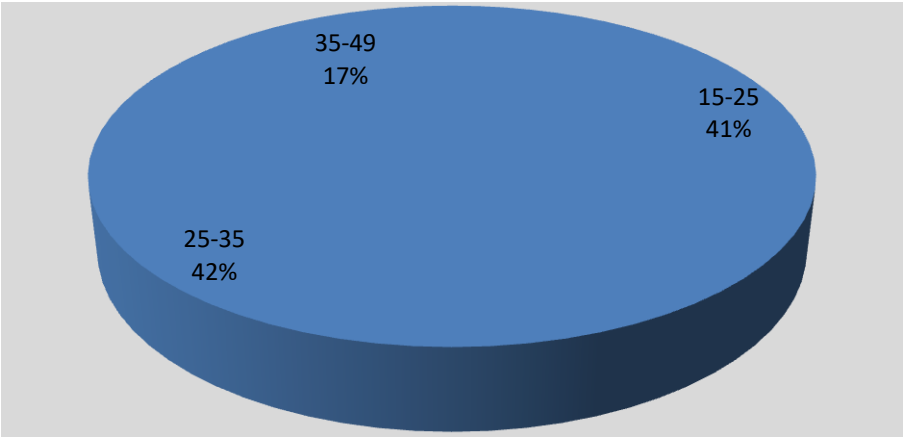
Majority 70(50.0%) of the respondents were youth and the least respondents were from the elderly group of women 16(11.4%).The women who attained primary level 77(55%) responded most and were followed by those who achieved ordinary level of education 50(35.7%) and the least 1(0.7%) respondents were from those who ended at the advanced level of education. Most of the respondents were Christian women 139(99.3%) as compared to the Moslem women

1(0.7%).Majority 114(81.4%) of the respondents were married women, followed by the singles 20(14.3%) and the least number of respondents were widowed 1(0.7%).Majority of the respondents were unemployed 127(90.7%) and the least were employed women 13(9.3%)

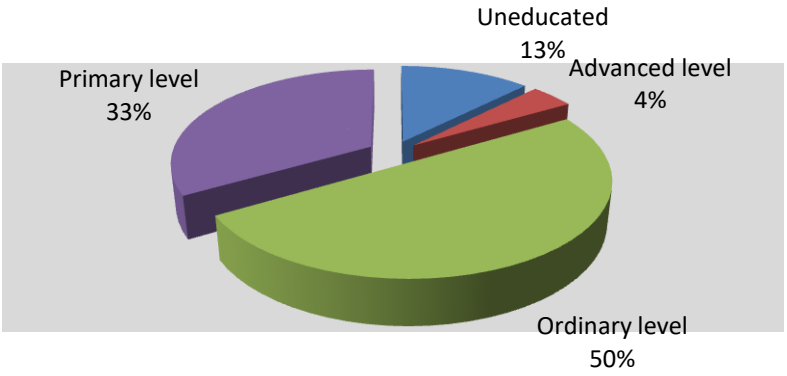
3.2 Socio- demographic characteristics of women who were using family planning

Family planning was used by 24 women of childbearing age.10 (41%) were adolescent and youth, and 4(17%) were adults. 3(13%) were uneducated, 1(4%) attained advanced level, 12(50%) attained ordinary level and 8(33%) attained primary level of education. All the women using Family planning were Christian. 2(8%) were employed and 22(92%) were unemployed. 5(21%) were single, 2(8%) were divorced and 17(71%) were married

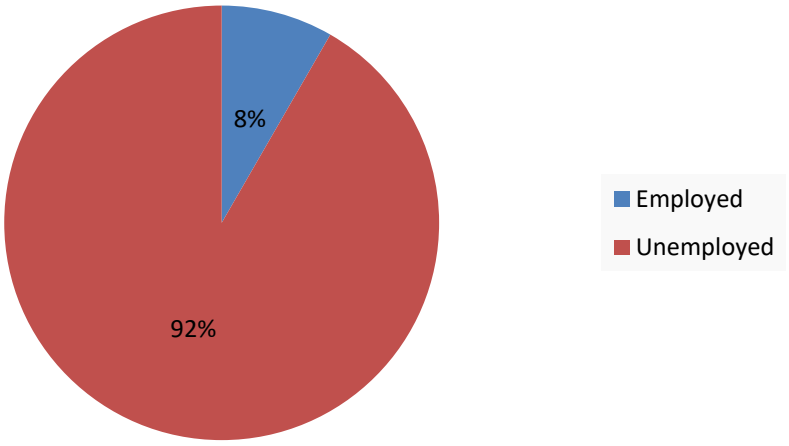
Graph 1: Age group of women in reproductive age who were using Family planning



Graph 2: Education level of women in reproductive age who were using family planning

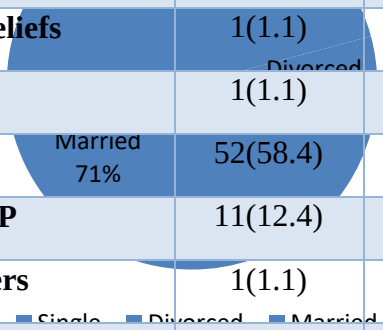


Graph 3: Occupation status of women in reproductive age who were using family planning



Graph 4: Marital status of women in reproductive age who were using family planning

Against religion	5(5.6)	2(12.5)	1(4.0)	3.3(0.16,198.31)	0.3205
Against cultural beliefs	1(1.1)	0(0.0)	1(4.0)	-	-
Expensive	1(1.1)	1(6.3)	0(0.0)	-	-
Fear side effects	52(58.4)	8(50.0)	16(64.0)	0.7(0.19,2.15)	0.4389
Ignorance about FP	11(12.4)	4(25.0)	3(12.0)	2.3(0.34,16.85)	0.3056
Influence from peers	1(1.1)	0(0.0)	1(4.0)	-	-
Misconception about FP	3(3.4)	0(0.0)	0(0.0)	-	-
Negative attitude of husbands	16(18.0)	2(12.5)	2(8.0)	1.6(0.12,23.25)	0.6518
None	2(2.3)	1(6.3)	0(0.0)	-	-
Others	5(5.6)	0(0.0)	0(0.0)	-	-
Poor attitude towards FP	1(1.1)	0(0.0)	1(4.0)	-	-



3.5 Reasons for not using family planning among women in reproductive age

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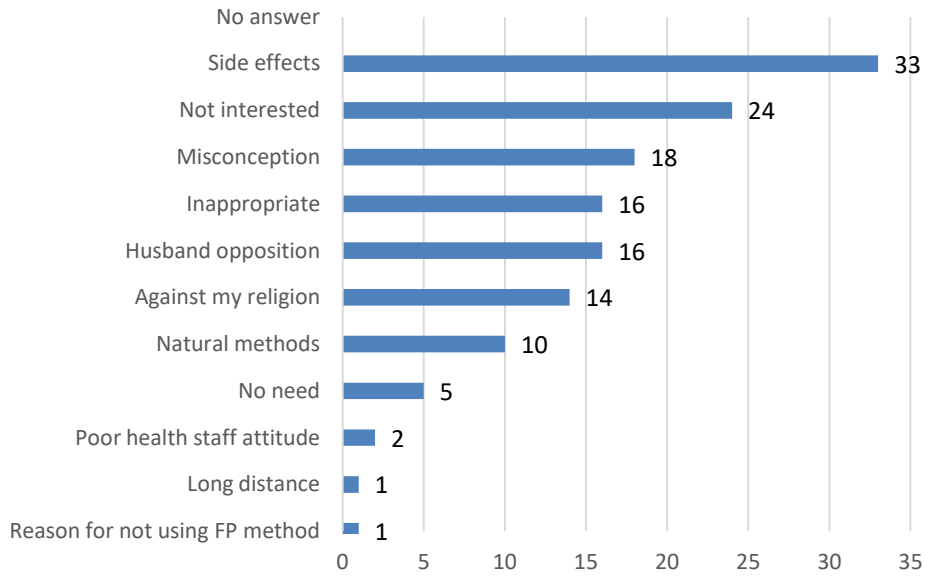

Figure 1: Questionnaire survey results

Fear of contraceptive side effects (17.1%) was the most common reason for not using family planning, whereas great distances (0.7%) was the least reported reason for not using family planning in the face of COVID 19 among women in reproductive age in Amuria TC.

3.4 Factors associated with Family planning use in the face of COVID-19.

Table 2 : Multivariate analysis

Socio Demographic factors	Currently using Family Planning				
	Total	Yes	No	OR(95% CI)	p-value
Age group					

15-25	25(41.0)	10(41.7)	15(40.5)	1.0(0.4,3.0)	0.9310
25-35	29(47.5)	10(41.6)	19(51.4)	0.7(0.2,1.9)	0.4631
35-49	7(11.5)	4(16.7)	3(8.1)	2.3(0.4,11.5)	0.3096
Religion					
Christian	60(98.4)	24(100)	36(97.3)	-	0.4206
Muslim	1(1.6)	0(0.0)	1(2.7)	0.0(-)	0.4206
Occupation					
Employed	13(9.3)	2(8.3)	3(8.1)	1.0(0.2,6.8)	0.9752
Unemployed	127(90.7)	22(91.7)	34(91.9)	1.0(0.1,6.34)	0.9752
Marital status					
Single	20(14.3)	5(20.8)	2(5.4)	4.6(0.8,27.8)	0.0670
Widowed	1(0.7)	0(0.0)	0(0.0)	-	-
Divorced	5(3.6)	2(8.3)	1(2.7)	3.3(0.3,39.8)	0.3245
Married	114(81.4)	17(70.8)	34(91.9)	0.2(0.05,1.0)	0.0314
Education level					
None	3(4.9)	3(12.5)	0(0.0)	-	0.0287
Tertiary	2(3.3)	1(4.2)	1(2.7)	1.6(0.1,27.0)	0.7557
Advanced	1(1.6)	0(0.0)	1(2.7)	0.00(-)	0.4206
Ordinary	22(36.1)	12(50.0)	10(27.0)	2.7(0.9,8.3)	0.0702
Primary	33(54.1)	8(33.3)	25(67.6)	0.2(0.1,0.8)	0.0093

Majority of the women in reproductive age who responded were married (114, 81.4%) In comparison to the widowed, divorced, and married, singles were 4.6 times more likely to use family planning. When compared to the widowed and married, the divorced were 3.3 times more likely to use family planning. Family planning was used 0.2 times less frequently by married people. This was statistically significant at a 95% confidence interval.

Most of the respondents (33(54.1%) had completed primary school. However, the majority of people who use family planning had completed ordinary level of education (12, 50.0%) Those with a primary education, however, were 0.2 times more likely to utilize family planning, which was statistically significant at a 95% confidence interval.

DISCUSSION

Our study aimed at determining the prevalence and factors associated with family planning use during the COVID-19 pandemic in Amuria town council. The socio demographic characteristics were assessed using cross sectional questionnaire and descriptive statistics was done. Univariate, bivariate and multi variate analysis was done to identify factors associated with family planning use in Amuria town council Uganda.

Our study found prevalence of family planning in Amuria town council at 17.1% which is lower than the national target of 50%. The low prevalence of family planning could be because of lockdowns instituted during the COVID-19 pandemic that limited public movement hence affecting access to family planning services. Many clients also feared to visit health facilities and interact with health care professionals because they thought they would contract COVID-19. Our findings are in accord with some studies done in Bangladesh, Ghana, Uganda and Kenya [11] [12][13][14][15]. Roy et all (2021) ,in their study where they looked at prevalence and factors associated with family planning during COVID-19 in Bangladesh found out that 24.42% of the respondents were using contraceptive pills which is lower than before the pandemic [12]. A study by Rahma et all (2022) ((Navigating family planning access during COVID-19) in Kenya Suggested that COVID-19 –response measures changed the context of normative influence on family planning, because the financial insecurity ,increased time at home with the husband and limited access to seek support of health workers affected how women negotiated for family planning and use within homes [15]. The above is also in line with WHO (2022) pulse survey report that reported some 59% of countries had partial disruptions and 9% had severe disruptions in family planning use and contraceptive prevalence. UNFPA (2022) noted that 12 million women may have been unable to access family planning as result of the COVID-19 pandemic. The other contributing factors to low prevalence noted in those studies include; Husband opposition against women using family planning. Fear of side effects, being married and low level of education [11][12][13][14][15].

We found out that 58.4% of our women were not using family planning because of the anticipated side effects and this finding is line with many studies. Ferdousi-S et all (2010) revealed that fear for the adverse effect was the most common reason for not using family planning [16]. Ouma S et all (2015), in their study that looked at obstacles to family planning use

among rural women in Atiak Health Centre 1v,noted high cost of family planning as one of reasons why mothers were not using family planning [13]. In addition Allen K (2014), also noted that perceived side effects of female contraceptives methods which disrupt sexual activity affected uptake of family planning[11].

We revealed that the married women are 0.2 times less likely to use family planning. Single ladies were 4.6 times more likely to use family planning as compared to widowed, divorced and married. Married women in Amuria town council, cannot take decisions for themselves without the consent of their husbands who are considered heads of the family because of culture. This makes the married women more unlikely to use contraceptives if their husband disagrees. In addition many married couples prefer to have many children. Our finding are in line with study by Ouma et al (2015)where they found that husbands forbidding women from using family planning and lack of community leader engagement contributed to low uptake of family planning. Another study in Ghana by Gaetano et all (2014) noted that married respondents were less likely to use contraceptives as compared to unmarried [14]. Their study also noted that marital status was an important predictor for contraceptive use [14]. Allen et all (2014) noted in their study that preference for large family size and concerns by men that use of contraceptives would lead to extramarital sexual relationships affected uptake of family planning[11]. In addition to the above study by Roy et all (2021) revealed that married women who had supportive attitude from husbands had 1.95 times higher family planning uptake as compared to those without supportive attitude from their husbands [12].

In our study we also found out that 50% those using family planning completed ordinary level education. This suggests that women with higher education are more likely to go for family planning as compared to those with lower education. This is because women with higher education are more informed about the benefits of family planning. In Amuria a majority of less educated women have poor awareness of health and have no incentive to use family planning. Our study is in accord with other studies Roy N et all revealed that the odds of those with secondary education was 1.66 times high compared to those with bachelor's degree [12]. Murarkar et all (2011) and other known studies demonstrated an association between contraceptive acceptance and literacy status [17]. Murarkar et all also noted that Contraceptive prevalence was more among women who graduate and above [17]. Sharma et all (2012) revealed

that education of women played crucial role in the utilization of family planning methods, 82.8% women who were educated up to high school and above used family planning[18].

LIMITATIONS OF OUR STUDY

Information bias, some women were secretly using family planning, so they would give negative responses in presence of husbands. Difficult to compare our results with others because a few studies were conducted during the COVID-19 period. The study design we used was cross sectional it's cheap but it reveals only associations but not causation.

CONCLUSION

We found out that the prevalence of family planning among women of reproductive age was 17.1% which is below the national target of 50 percent. Being married and having low level of education was associated with low uptake.

RECOMMENDATION

Family planning programs in the rural districts should focus more on the married and less educated women. Male involvement in family should be encouraged in all rural communities.

CONSENT AND ETHICAL APPROVAL.

Ethical approval was got from the institutional review board of Mbale regional referral hospital through Busitema University COBERS program. Permission to conduct the study in Amuria district was got from the district health officer. Written informed consent was obtained from all the respondents, after explaining the objectives of the study. Confidentiality was observed and participants were free to withdraw from the study if they wished. Data collected was kept under lock and key by principal investigator**.**

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