

# Factors Associated with Decision Making about Family Planning Use by Refugee and Host Population in Adjumani District, West Nile, Uganda; A Cross Sectional Study

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## Research Article

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# Abstract

## Introduction

Uganda currently hosts an estimated 1.5 million refugees. The majority, (60.5%, n = 964,960) come from South Sudan. This study investigated factors associated with decision making for Family Planning (FP) use among host and refugee populations in Adjumani district, Uganda.

## Methods

This was a comparative cross sectional study conducted in three refugee settlements of Pagirinya, Nyumazi and Mirieyi, and the surrounding host communities in Adjumani district. A total of 1,307 respondents, comprising 661 refugees and 646 host household heads were randomly selected and interviewed using multi stage cluster sampling. Quantitative data were collected using structured questionnaires with Open Data Kit (ODK). Data were analyzed using STATA V.14 C. Multivariable logistic regression was carried out to establish the factors associated with decision making to use family planning.

## Results

The study found that modern contraceptive prevalence rate (mCPR) was 28.6% and 28.4% amongst host and refugees respectively. The factors significantly associated with decision to use FP amongst host population included religion, Anglicans were 6.2 times more likely to use FP compared to Catholics, AOR = 6.21, 95% CI [1.11-34.57]. Respondents who made joint decisions were nearly three times more likely to use modern FP methods compared to those who made personal decision, AOR = 2.69, 95% CI [0.89-138.39].

Similarly, amongst refugees, Anglicans were more likely to use modern family planning methods compared to Catholic refugees; AOR= 5, 95% CI [4.75-13.23] and AOR= 7.05 95% CI [2.8-44.88] respectively; respondents who attained tertiary education. AOR = 2.17 95% CI [0.11-43.08] and those who made joint decision; AOR 6.43 95% CI [1.78-16.08] were more likely to use modern FP methods.

The key barriers to decision making regarding modern FP use by the host, included harassment of women who did not consult their significant others (AOR = 0.07, 95% CI [0.01-0.79] and separation/divorce (AOR = 0.03, 95% CI [0.00-0.35]). Whereas amongst the refugees, main reasons for not using FP included not wanting to use FP" [45.8%], wanting to become pregnant [6.8%], and fear of side effects [5.8%].

## Conclusions

Use of modern family planning is low amongst both refugee and host populations in Adjumani district. The main factors associated with decision to use FP amongst both refugee and host populations include religion, level of education and husband's approval. Main reasons for not using modern FP methods

include fear of side effects and not wanting to use FP by both host and refugees respectively. There is need to sensitize both communities about the benefits of FP and promote male involvement including couple counseling at community level.

## Introduction

Globally, there are an estimated 89.3 million people displaced [1]. Over half of the world's refugee population come from Syria, Afghanistan and South Sudan [1]. Uganda currently hosts an estimated 1.5 million refugees and is the leading refugee-hosting country in Africa and 3<sup>rd</sup> largest refugee hosting nation in the world. In Uganda, 94% of the refugees live in settlements established in 12 districts across the country. The majority of the refugees in Uganda (60.5%, n = 964,960) come from South Sudan and (29.3%, n = 467,004) come from the Democratic Republic of Congo and others (10.2%, n = 163,441) from Somalia, Burundi, Rwanda, Eritrea, Ethiopia and Sudan[1].

Family Planning [FP] is a fundamental human right and is central to reproduction [2]. Family Planning is one of the most life-saving, empowering and cost-effective interventions for women and girls. However, it remains underfunded with limited prioritization in humanitarian responses. Although expenditure on Global Humanitarian emergencies has significantly increased from US\$18 billion in 2005 to over US\$ 28 billion to date, little or no budget is earmarked for family planning services [3].

The ability of migrants including refugees to access FP services in the host country is often affected by several barriers including language, low educational level, lack of information, influence by significant others, limited income, desire to replace lost family members, moral values, certain taboos, cultural norms, religious impediments and personal experience with contraceptives side effects [4];[5];[6]. In addition socio-cultural preference and unacceptability of contraception also pose significant barriers to making decision to use FP [7];[8]. Other structural barriers that affect use of FP by refugees in humanitarian settings include lack of privacy, weak supply chain system leading to unavailability of a range of methods of FP and regular stock outs, weak service provision with poor quality of care for women and girls leading to long waiting hours [3]. These barriers have contributed to high unmet need for FP among women and girls leading to high rates of unintended pregnancies.

Amongst the host population, studies by [9]–[13] have reported several factors that affect FP use. These include weak health systems, poor services, myths and misconceptions, lack of partner support and socio-economic factors. However, in developing countries, over 200 million women who wish to avoid next pregnancy lack access to their preferred choice of FP method. Therefore, provision of choice for women is important to promote the use of family planning[14] [15]. In Uganda the national mCPR stands at 35% with high-unmet need for FP at 25% (UDHS, 2016). While the mCPR in Adjumani district is 25%, the adolescent birth rate is 20% with maternal mortality ratio of 600/100,000 live births according to Adjumani district development plan of 2020 which is far beyond the national MMR of 336/100,000 live births [14] [16]. The total fertility rate in Adjumani is estimated at 8.9% with an annual growth rate of 6.4%, which is over two fold the national annual growth rate of 3.0% [14].

Several studies have shown the possibility, feasibility and strategies of providing FP services in humanitarian settings. FP methods should therefore be culturally and socially acceptable by all the ethnic and religious groups within the refugee settlements and the existing structures be strengthened and used to expand access and availability of FP services.

## Methods

### Study setting

The study was conducted in Adjumani refugee affected district in west Nile region, Uganda. Adjumani district is located on the eastern bank of the Albert Nile, and shares common border with Moyo district in the north, Amuru district in the south and east, Arua and Yumbe districts in the west. Adjumani is bordered by the Republic of South Sudan in the northeast. The district has a total land area of 3128 square kilometers, with 46.8 square kilometers covered by water, 37.44 square kilometers is occupied by forest and 1455 square kilometers is arable land.

Adjumani district hosts more refugees 244,374 (50.7%) than the indigenous population of 237,400 (49.3%) inhabitants. The current refugee population come mainly from South Sudan and have been settled in Adjumani since 2013. According to the Office of the Prime Minister (OPM), in 2022 a total of 244,374 refugees and asylum seekers were living in nineteen settlements in Adjumani district. Among the refugees, 85% (182,977) are women and children. This study was conducted in three settlements namely; Nyumanzi, Pagirinya and Mirieyi and the surrounding host communities.

### Study design

This was a comparative cross-sectional study. The study population was women of reproductive age (15 - 49 years), both users and non-users of modern FP methods and men whose partners were either or not using any FP method.

### Sample size determination

A total of 1307 respondents were sampled and interviewed. This comprised 646 of host and 661 refugees. The sample sizes were computed using comparative study sampling procedure. **See table 1**

Of all the respondents interviewed, about half comprised the host population, [49%, n= 646] with [33%, n = 214 from Mirieyi, 34%, n = 219 from Nyumanzi and [33%, n = 213 from Pagirinya]. While more than half of the respondents interviewed [51%, n= 661] were refugees [9%, n = 57 from Mirieyi]; 46.4%, n = 307 from Nyumanzi and 44.9%, n = 297 from Pagirinya]. **See table 2**

### Sampling procedure

Multi stage cluster sampling technique was used to select both refugee and host populations. Three refugee settlements were purposively selected because of having the highest number of refugees and

having existed in the district for long over 23 years i.e (Nyumanzi, 40,877; Pagirinya, 36,784 and Mirieyi, 7,067) being the newest settlement in Adjumani district. Simple random sampling was used to select the respondents from three clusters or zones, three villages, nine blocks and 661 households. For the host population, three counties were purposively selected. The four sub counties, eight parishes, sixteen villages and 646 households were selected using simple random sampling accordingly.

The number of participants per group required to detect a difference in  $P_1$  and  $P_2$  in the proportions with significant level  $\alpha$  and power  $1-\beta$  was estimated using the formula below;

$$n = \frac{(P_1(1-P_1) + P_2(1-P_2)) (Z_{1-\alpha/2} + Z_{1-\beta})^2}{(P_1-P_2)^2}$$

Where  $P_1$  is the proportion of FP use in host population and  $P_2$  is the expected proportion of FP use in refugee populations

$$\begin{aligned} n &= \frac{[P_1(1-P_1) + P_2(1-P_2)] (Z_{1-\alpha/2} + Z_{1-\beta})^2}{(P_1-P_2)^2} \\ &= \frac{[0.25(1-0.25)+0.15(1-0.15)](1.96 + 0.842)^2}{(0.25-0.15)^2} \\ &= \frac{[0.1875 + 0.1275][7.851204]}{0.01} \\ &= \frac{2.473}{0.01} = 247.312 \end{aligned}$$

Although sample size for each population was estimated at **248** respondents, the acceptance rate to participate was segmented at 90%. Thus, the researcher accounted for the remaining 10%. Accounting for design effect, the sample size was doubled giving a total of **496** for refugee and a total of 496 for host populations, totaling to **992** respondents. To increase power of the study, a total of 1307 respondents were then interviewed.

### Data collection procedures

Data were collected through surveys from both refugee and host populations using translated pre-tested structured questionnaires. The research assistants were trained for 4 days prior to data collection. Of every 2 women interviewed, the 3<sup>rd</sup> one was a man in both communities. A total of 661 respondents were

interviewed from the refugee cluster/zone and 646 respondents were interviewed from the host communities. Of these a total of 445 women and 216 men were interviewed from the refugee population and a total of 388 women and 258 men from the host population respectively.

Ethical clearance was obtained from the Makerere University School of Public Health Higher Degrees Research and Ethic Committee (HDREC) # 188 and Uganda National Council of Science and Technology. Written permission was also obtained from the Office of the Prime Minister in Kampala and Adjumani district.

### **Data management and analysis**

Data were collected using the Open Data Kit (ODK) and uploaded into Epidata 3.1. The data were reviewed for completeness, consistency and accuracy. The quantitative data were analyzed using STATA software Version 14 C. Univariate, bivariate and multivariate analysis were carried out to establish factors associated with decision making for FP use among refugee and host populations. Statistical significance was set at p-value < 0.05.

### **Findings**

#### **See table 3**

The majority of respondents [64%, n = 833] were females and [36%, n = 474] were males. Two thirds [67%, n = 879] of the respondents were in monogamy marriage/cohabiting. More than a third of the respondents [39%, n = 510] were in the age group of 25-35 years. The mean age for respondents in the host communities was 32.34, SD 10.30. Whereas for the refugees, the mean age was 30.67, SD 10.07.

More than a third of the refugee respondents [38%, n = 492] were Catholics compared to [17%, n = 228] of the host population. More than half [55%, n = 720] of all respondents had no formal education. A higher proportion of the refugee [8%, n = 100] compared to host respondents [0.5%, n = 6] had attained tertiary education.

### **Contraceptive prevalence amongst host and refugee populations**

#### **See table 4**

The study found that a similar proportion of refugees [40%, n = 266] and host [42%, n = 269] have ever used a method of FP. However, the majority of hosts 58%, n=377] and [60%, n=772] of refugees have never used FP method (Table 4).

#### **See figure 1**

The study shows that more than a quarter [29%, n= 77] of the host and [28%, n = 76] of the refugee population are currently using modern family planning methods. **See table 5**

The study revealed that a significantly higher proportion of refugees [81%, n = 535] compared to [76%, n = 488] of the host population [p=0.02] would not like to have another child. And a significantly higher proportion of refugees [63%, n = 337] compared to host population [39%, n = 190] preferred to have more than three children. The study also showed that a higher proportion of host population [45%, n = 289] compared to refugees [34%, n = 225] prefer birth interval of more than two years. The study further revealed that more than half of the host population [52%, n = 334] compared to a quarter of the refugee population [26%, n = 171] plan to use modern contraception to prevent pregnancy before the desired time [p=0.00]. However, more than a fifth of respondents [22%, n = 283], with [24%, n = 157] of refugees compared to [20%, n = 126] of host population who had plans to prevent pregnancy before the desired time were not using any modern methods of FP.

### **See table 6**

The study revealed that the main reasons for not using contraception among the host population were fear of side effects [36%, n = 135], don't want to use modern FP method [28%, n = 107], husband/partner disapproval [6%, n = 22], infrequent sex [6%, n = 21], want to become pregnant [5%, n = 19] and inconvenient to use [5%, n = 19].

However, for the refugee population, the main reasons for not using modern FP methods included; don't want to use FP method [46%, n = 181], infrequent sex /husband away [18%, n = 69], fear of side effects [6%, n = 23], wanted to become pregnant [7%, n = 27], husband/partner disapproved [6%, n = 22].

### **See table 7**

The study found that the main FP methods being used by the host population were male condoms [34%, n = 65], injectable [21%, n = 40] and implants [19%, n = 36].

Similarly, the main modern FP methods being used by the refugees included; male condoms [23%, n = 43], injectable [13%, n = 25] and implants [20%, n = 37]. However, a significant proportion of host population [21, n=40] compared to refugee population [13%, n=25] were using injectable.

### **See table 8**

The study found that the main FP methods used by the host population were male condoms [34%, n = 65], injectable [21%, n = 40] and implants [19%, n = 36].

Similarly, the main modern FP methods used by the refugees included; male condoms [23%, n = 43], injectable [13%, n = 25] and implants [20%, n = 37]. However, a significant proportion of host population [21, n=40] compared to refugee population [13%, n=25] were using injectable

### **See table 9**

This study showed that amongst the host population, the main factor significantly associated with decision making is religion. Anglicans are 6 times more likely to make decision to use FP compared to the

Catholics AOR = 6.21, 95% CI [1.11-34.57]. The study revealed that other factors significantly associated with decision making to use modern FP include joint decision by couples, AOR = 0.04, 95% CI [0.89-138.39] and p-value 0.04; having no prior plans to use FP methods AOR = 0.05, 95% CI [0.01-0.15] and having family interest for large families AOR 0.02, 95% CI [0.00-0.40]. The study further revealed that not consulting key actors in the family prior to FP use is associated with; harassment and separation/divorce. Women who reported fear for being harassed and separated/divorced because of no approval by the key actors prior to FP use at family level were less likely to use modern FP methods, AOR 0.07, 95% CI [0.01-0.79] and AOR 0.03, 95% CI [0.00-0.35] respectively.

## See table 10

The study showed that among the refugee population, factors significantly associated with decision making for FP use included religion, joint decision and level of education. Anglicans were more likely to use modern FP methods compared to the Catholics in the settlements; AOR= 5, 95% CI [4.75-132.23]. women who had joint decision with their husbands and women who had attained secondary education were more likely to make decision to use modern FP; AOR 6.43, 95% CI [1.78-16.08] and AOR = 12.15, 95% CI [1.65-89.02] respectively.

## Discussions

The study revealed that over a quarter of refugees and the host population are currently using modern FP methods. The main factors that are significantly associated with decision to use FP include religion, level of education, husband advise and joint decision making by couples. However, the main factors that hinder use of FP include; socio- cultural beliefs/norms, don't want to use, infrequent sex, husband disapproval, side effects and poor health service.

We found that mCPR was 29% and 28% amongst refugees and host respectively. The mCPR for the refugee in Adjumani is higher than the mCPR back in the refugee host country – South Sudan. The high mCPR amongst the refugees in Uganda could be attributed to the high exposure to FP information and services in the settlements provided by several partners who offer FP outreaches in the various refugee settlements in the district.

For the host population, however, the mCPR is lower than the national mCPR of 35% [14]. This is not surprising because the west Nile region has always had highest un met need for FP in the country at 43% compared to national average of 28%. This may be attributed to poverty as women in the west Nile fall in the lowest wealth quintile. This finding concurs with the [14] which reported that unmet need decreases with increasing wealth, from 37% among women in the lowest wealth quintile to 22% among women in the highest wealth quintile respectively.

However, the majority of the host [45%] compared to refugees [34%] were not using any modern FP methods. This explains the need to address challenges that may stop them from fulfilling their

contraceptive desires. This is in line with [14] reported that three of every ten women who want to avoid or delay next pregnancy are not using any modern FP. Studies by [16]–[20] reported that unmet need is still a big challenge for women in developing countries and as such calls for mechanisms that can facilitate the reduction.

The study revealed several factors that influence decision to use modern FP. These include religion, education, joint decision and partner advise. The study revealed that the Anglicans were 6 times more likely to use modern FP compared to Catholics. Although, majority of the refugee and host populations in Adjumani district are Catholics (56%), the catholic teaching discourage use of contraception because it is regarded as an abortion, thus killing the unborn baby. A study by [21] in Burkina Faso revealed that much as religious leaders have good knowledge about FP, they are reluctant to promote FP use. A study done in Somalia also revealed that religion is key barrier to access to FP [22].

Our study found that the level of education significantly influences decision to use FP. Refugees with atleast primary level or secondary level of education were more likely to make decision to use modern FP. Several studies by [23]–[27] show that education has the greatest influence on FP use because of knowledge, empowerment, economic status and autonomy hence increased ability to make decision.

We found that joint decision by couples was significantly associated with FP use among host and among refugees. The refugees who made joint decision were six times more likely to use modern FP compared to those who made personal decision without husbands' involvement. The host who made joint decision were more than two times more likely to use modern FP compared to those who made personal decision. Our finding is consistent with a study done in Kenya where a large proportion of younger men believed that the couple should discuss FP use and reach consensus [2].

Furthermore, our study findings concur with [28] who reported that contraceptive use was significantly associated with partner's support for decision making and walking to the health facility ( $p=0.039$ , 95% CI). Additionally, a study done in Oyo State – Nigeria by [29] reported that the attitudes of male partners towards FP was significantly associated with the lack of FP use. Our study also revealed that respondents whose partners were positive about FP use were more likely to make decision to use FP as compared to those whose partners were against FP use and discouraged them from using FP.

The study also found that the most commonly used modern FP methods were condoms (29%), implants (19.3%) and injectable (17.2%). Male Condoms was the main FP method used by both host and refugees. The findings from this study is consistent with a study done by [30] in Canada which revealed that condoms were the most commonly used form of contraception among both refugees and host population. Condom as FP method may be widely used because of its dual protection nature. This suggest the need to increase community sensitization on its benefits of dual protection against pregnancy and HIV acquisition.

This study revealed that significantly higher proportion of refugees [81%,  $n = 535$ ] would not like to have another child compared to host [76%,  $n = 488$ ]. Among the host, the reasons they gave were that they

have other children already, don't have husbands, and some were undecided. While for refugees, they reported lack of money and absence of husbands who were in and out of the settlements. This is because most men go back to South Sudan and only return occasionally to Uganda.

### **Barriers to decision making to use modern family planning methods**

The study found that the majority of the refugees [71.4%, n=192] are not currently using any FP method. The major barriers were; socio- cultural beliefs/norms, don't want to use it/infrequent sex, husband disapproval, side effects and poor health services. Furthermore, the study revealed that women who did not consult key actors in the family prior to FP use, were harassed and separated/divorced which has posed a lot of fears in many women. Our study also found out that several socio- cultural factors such as need for more children, compensating for the dowry paid for wife, search for male child leading to lack of decision to use modern FP. A study done by [31]–[35] reported that socio cultural factors and husband disapproval hinder use of FP despite strong interest of individuals to use family planning methods.

Our study further revealed that refugee population does not want to use family planning methods because of infrequent sex due to the fact that the men are often not around in the settlements. Several studies also show that many refugees don't want to use FP because of interest to have large families to replace those who died due to the hardships of displacement [33].

Our study revealed that husband disapproval was one of the factors affecting decision making to use FP. Studies by [36], among the Fertit ethnic group in South Sudan revealed that men are sole decision-makers at households and is not questionable. This is in agreement with other studies done in Africa by several scholars [2], [29], [37], [38] that reported unequal gender relations and partner disapproval affecting decision to use FP amongst host populations.

Side effects was identified as another hindrance to use of FP services. Whereas other studies show that side effect is the cause of discontinuation of modern FP methods within the first one year of use [39], [40], it is also evident that women switch from one method to a more effective method [41]. This study revealed that amongst the host population [71.4%, n=192] are not currently using any FP method because of fear of side effects as compared with only [6%, n=23] of the refugees. This may be because service providers do not take time to explain the likely side effects and what the woman should do if it happens as a way of managing the side effects when experienced.

Our study further revealed that limited quality health services, myths and misconceptions as factors that affected decision to use modern FP. A significantly higher proportion of host population [93%] reported health centre/hospitals as their major source of FP services compared to the refugee populations [8.0%], suggesting how refugees may not have access to higher level and quality FP services. Several studies by [42]–[44] revealed that weak health system and poor health services hinder decision to use FP. Furthermore, studies have revealed that many refugees reported not being satisfied with the quality of health services offered to them because of long queues and lack of sufficient health workers which affect their decision to use modern FP [45], [46].

## Conclusion And Recommendations

The study has revealed low modern family planning use among both refugees and host population in Adjumani district. More than half of the women population has never used any modern FP methods. The main hindrances to FP use include fear of side effects and not wanting to use FP by host and refugee populations respectively. Other key factors that affect decision making for FP use include religion, age, education and occupation. Therefore, there is need for collaboration with Ministry of Health and Adjumani district local government leadership and partners to build capacity of service providers in the management of side effect that hinder uptake of FP. There is need to conduct outreaches to create more awareness on the benefits of FP as well as offer FP services. Couple counselling at community level for both refugees and the populations should be emphasized and implemented to encourage joint decision. Government should involve Village Health Teams to increase awareness and address personal barriers including myths and misconceptions associated with FP use. There is need to involve Cultural, Religious and Political leaders as key influencers in decision making for FP use in these settings.

## Declarations

### **Ethics approval and consent to participate**

The ethical clearance for this study was obtained from the Makerere University School of Public Health Higher Degrees Research and Ethic Committee (HDREC) # 188 and Uganda National Council of Science and Technology. Written permission to access the refugee community was obtained from the Office of the Prime Minister (OPM) and Adjumani district Local government. Participants were informed about the purpose of the study, their rights as potential participants and their confidentiality were guaranteed. Data collection tools were designed in the local language of the participants from both populations. Participants were informed that participation in the study was voluntary, that they did not have to answer all questions and could voluntarily stop participation if they needed to at any time without any difficulty. All participants first provided written informed consents before participation. In order to maintain privacy, study numbers were used instead of participants' names and other identifying information.

### **Consent for publication**

Not applicable.

### **Availability of data and materials**

The datasets used were analyzed during the current study and are available from the corresponding author on reasonable request.

### **Competing interests**

The authors declare that they have no competing interests.

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## Authors' contributions

RA, COG, EN, LA and FM conceptualized and designed the study. RA, COG and FM conducted data analysis and interpreted data of the study and prepared figures and tables. All authors reviewed the study results. RA and COG prepared the first draft, incorporated revisions and prepared the final draft. All the authors reviewed drafts and approved the final manuscript.

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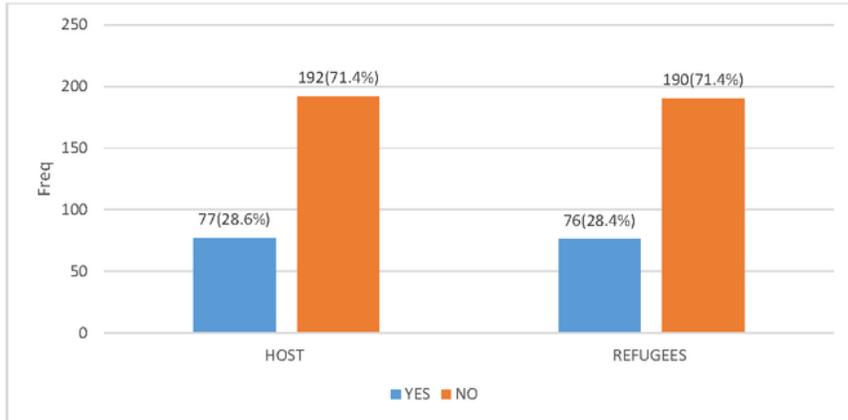
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## Tables

Table 1 to 10 are available in the Supplementary Files section.

## Figures



1

## Figure 1

Current use of any modern Family Planning methods

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