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Knowledge, Attitudes, and Practices of Family Planning among Mothers attending Antenatal Care in Rural Uganda: Implications for Maternal Health and Population Growth

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ABSTRACT

Family planning remains a critical aspect of maternal health and population management in Uganda, particularly in rural areas. Despite concerted efforts to increase awareness and accessibility, utilization rates remain suboptimal. This descriptive cross-sectional study aimed to assess the knowledge, attitudes, and practices of family planning among mothers attending antenatal care in Kyotera district, Uganda. A sample of 138 participants completed questionnaires, revealing a nuanced landscape: while overall knowledge of family planning was high (73.9%), a significant minority demonstrated poor understanding (26.1%). Similarly, though the majority exhibited positive attitudes towards family planning (71.0%), a substantial proportion held negative views (29.0%). Notably, 62.3% of mothers were not utilizing any family planning methods, despite 37.7% reporting usage, with injectable contraceptives being the most common (42.3%). These findings underscore the need for targeted education campaigns, enhanced service accessibility, and dispelling misconceptions to promote informed decision-making and uptake of family planning methods. Addressing these challenges is vital for improving maternal health outcomes and managing population growth in rural Uganda.

Keywords: Family planning, Maternal health, Kyotera district, Rural Uganda, Antenatal care, Knowledge, Attitudes, Practices.

INTRODUCTION

Family planning refers to a consideration of the number of children a person wishes to have, including a choice to have no children, at the age at which they wish to have them [1, 2]. Worldwide, the maternal mortality ratio remains high, at 287 maternal deaths per 100,000 births; a large proportion of these deaths occur among young women [2, 3]. In Uganda, the maternal mortality ratio was estimated to be much higher than the worldwide average in 2018, at 438 per 100,000 births [4, 5]. An estimated one-third of women who give birth in developing countries are below age 20, which exposes them to a greater risk of illness and death related to maternal causes [6]. Globally, according to the 2019 WHO Report, over 25 million women give birth as a result of unmet needs in their reproductive plans, and this is a worrisome concern for policymakers, demographers, health specialists, social scientists, and the public. Family planning methods can be categorized into two major groups, namely, modern and traditional methods. Modern family planning methods comprise female sterilization, male sterilization, pills, depot implants, male condoms, female condoms, intrauterine devices (IUD), lactation amenorrhea methods (LAM), and emergency contraception [7]. A study by the WHO in 2019 revealed an estimated 190 million women in developing countries who want to space or prevent childbearing but lack access to modern family planning methods. This situation normally results in high fertility, which in turn is associated with high levels of maternal mortality, especially among the poorest women [4, 8, 9]. In Africa, an estimated 11 million women who would prefer to delay or avoid pregnancy continue to lack access to safe and effective family planning [5, 9]. Thus, along with providing skilled maternal care, offering family planning is crucial to averting maternal deaths. Satisfying the unmet need for family planning alone could cut the number of maternal deaths by almost a third [10]. Although many Sub-

Saharan countries, particularly those in East Africa, have encouraged the use of planning programs, more than 0.5 million women continue to have an unmet need for family planning in the region [11]. In the Ugandan context, only 24% of all Ugandan sexually active women who are married women use family planning [12]. Whereas age before marriage has generally increased around the world, several parts of sub-Saharan Africa are struggling with a significant proportion of girls being married off before their 18th birthday [13, 14]. In Uganda, the role of females in family planning has been receiving greater attention recently as population planners have begun to recognize the importance of women's influence over reproductive decisions, whereby getting women involved in the family planning program will lead to increasing the use of contraceptive methods since population growth is becoming a universal problem [15, 16]. In Kyotera district, a cross-sectional study by Nakaggwa. et al. in 2020 showed that family planning use preference varied from woman to woman; 52% of women were well aware of different types of contraceptives but didn't know when to start family planning after delivery, and regarding emergency contraception, only 7% were using family planning within their first 6 months after delivery [17].

In Africa, there is a low 44% indication of the uptake levels for FP methods across northern Africa [18]. A related report about family planning use in Africa showed more than half (52 per cent) of currently married women have never used a family planning method, 32 per cent have used a modern method and 21 per cent have used a traditional method [19]. Approximately 30,000 African women die each year from unsafe abortion, reflecting a huge need for effective family planning [20]. Uganda has a high total fertility rate (TFR), at 6.2 children per woman [21], with a young population (52% are below age 15, and 17% are aged 15–24), and as this large cohort of young people enters the childbearing years, their reproductive behaviour will determine the growth and size of Uganda's population for decades to come. Uganda still struggles with a low contraceptive prevalence rate (CPR) of 30%, which is lower than that of her neighbours, Kenya, Rwanda, and Tanzania, which had a CPR of 46%, 52%, and 34%, respectively, at the time of their last surveys [22]. In Uganda, persistently high fertility levels have partly been attributed to a low percentage of family planning methods as well as a high proportion of adolescents starting childbearing at an early age [23, 24]. This shows that although women have heard about family planning, not all are actually using it, so there's a need to establish knowledge, attitudes, and practices associated with family planning usage to bridge this communication gap.

The study was designed to determine the knowledge, attitude, and practice of family planning among mothers attending antenatal care in Kyotera district.

METHODOLOGY

Study design

A descriptive cross-sectional study was carried out to collect data on postnatal mothers attending Kyotera Medical Center who meet the inclusion criteria.

Area of Study

The study was conducted at Kyotera Medical Center, Kyotera district. Kyotera is the central district, and Kyotera town is the biggest trading hub in the district. The district headquarters are located approximately 47 km by road southwest of Masaka, the nearest largest city. This is about 182 km by road southwest of Kampala. The district coordinates are 00°38'S31°33'E. The majority of people do substance farming, while others practice small-scale business trade as well as fishing.

Study population

The study population was all postnatal mothers who came to receive medical care services at Kyotera Medical Center.

Sample size determination

The sample size was determined by using the Fisher formula [25]:

Z^2PQ

Where;

S = sample size

s = $d2$

Z = standard deviation at the required degree of accuracy, which is 90%, which gives 1.96.

P is the proportion of the population with the desired characteristics. (10% UDHS,2021)

Q= 1-P

d is the degree of error you are able to accept.

$1.96)^2 * o.\ 7(1 - 0.1)$

S= 138

$s = 0.05^2$

Therefore, 138 women were recruited for the study.

Inclusion criteria

Postnatal mothers who would consent to participate in the study were recruited.

Exclusion criteria

Postnatal mothers who will decline to participate in the study.

Data Collection Instrument

The data was collected using a questionnaire with both open-ended and closed-ended questions. The data was collected by the principal investigator herself and three trained research assistants and was filled in by the respondents in the study.

Quality of data collection instruments

A semi-structured questionnaire with closed and open-ended questions was used. The questionnaire will include both structured and non-structured questions. These questions were both open-ended and closed-ended to enable respondents to exhaust every question that was paused.

Sampling Procedure

The study was carried out among residents living in Kyotera Medical Center who were available and willing to participate in the study. A simple random sampling technique was used, whereby the respondents were chosen at random in order to reach up to 138 respondents who participated in the study.

Data collection procedure

Data collection followed consent from the responsible community leaders. This was collected using a questionnaire. The interview will be conducted among residents at their homesteads and at their working places. The responses of the participants were filled into the questionnaire by the researcher and research assistants. This method was used because it will allow accurate recording of responses from both illiterate and literate respondents.

Data analysis

The analyzed data was presented in tables and figures showing frequencies and proportions. Analysis was done for continuous variables to report measures of central tendency like mean, median, and mode and measures of dispersion like range, interquartile range, and measures of variance like standard deviation for various independent variables. For categorical variables, data presentation was done through well-summarized "2 by 2" tables that show frequencies (percentages) and totals. For continuous and categorical data, bar graphs, histograms, and pie charts were used where appropriate to present the data. The data was analyzed using STATA version 11. The analysis of the data was done by simple linear and logistic regression as well as multiple linear and logistic analyses for continuous and categorical variables, respectively. The level of significance was present at 5%. Odds Ratios (ORs) with their respective 95% confidence intervals were used to assess for statistical associations, and p-values of less than 0.05 were considered statistically significant.

Data Control

To ensure quality control, the researcher, before the exercise, will conduct a one-day training for three research assistants. The questionnaire will be pre-tested at IAH to ensure it is worth collecting data. Any questions that were not clear on the pre-test were edited accordingly.

Ethical consideration

An introductory letter was obtained from university administration, which was presented by the medical superintendent of Kyotera Center, so as to allow me to collect data. Before studying, an informed consent form was sought from the participants, who would give their consent after full, complete, and truthful information was given.

RESULTS

Table 1: showing knowledge of family planning and its utilization

Knowledge assessment	Frequency (138)	Percentage	Comment on knowledge
1. Knew at least a method of FP			
Yes	134	97.1	Good Poor
No	04	2.9	
2. Where to get FP services			
Yes	123	89.1	Good
No	15	10.9	Poor
3. Type of family planning			
Yes	85	61.6	Good
No	53	38.4	Poor
4. How to use a female condom			
Yes	29	21.0	Good
No	109	78.0	Poor
5. How to use a male condom			
Yes	68	49.3	Good
No	70	50.7	Poor

Table 1 shows knowledge of family planning and its utilization, in which mothers were asked if they knew a method of family planning, and at least 134 (97.1%) said they knew different methods of family planning.

The study also showed that 123 (89.1%) knew places where to get family planning services, while at least 15 (10.9%) said they didn't know. Mothers were also asked to mention at least three types of family planning methods, of which 85 (61.6%) could mention them and 53 (38.5%) couldn't. The study also showed that only 109 (78.0%) said they didn't know how to use a female condom, while at least 29 (21.0%) said they knew how to use it. The study also shows that the majority (68, or 49.3%) of the mothers said they knew how a male condom works, while 70, or 50.7%, said they didn't know how to use a male condom. The study shows that using a male condom is significantly associated with family planning. Summary table of knowledge on family planning among mothers.

Table 2 shows a summary of mothers' knowledge of family planning

Score assessment out of 5	Frequency	Percentage	Comment
Score 3 or more	102	73.9	Good knowledge
Less than 3 score	36	26.1	Poor knowledge

From table 2 above, mothers were asked for their opinion if they thought family planning interfered with fertility. The majority of the mothers, 92 (66.7%), thought family planning did not interfere with fertility, while 46 (33.3%) thought that family planning causes infertility. The study also showed that when mothers were asked if condoms would disappear into the vagina, a majority of 129 (93.5%) thought that condoms could not disappear into the vagina; only 9 (6.5%) of the mothers thought they could. Mothers were also asked if family planning causes cancer, and the majority, 122 (88.4%), thought that family planning did not cause cancer, while at least 16 (11.6%) thought it causes cancer. Mothers were also asked if seeking a family planning method was an embarrassing situation, and the majority (87, or 63.0%) of those who were on family planning thought it was not an embarrassment.

Summary table of attitudes toward family planning among mothers

Table 3: showing summary score on the attitude of mothers toward family planning

Attitude score out of 4	**Frequency**	**Percentage**	**Comment**
Score 3 more	98	71.0	Good attitude
Less than 3 score	40	29.0	Poor attitude

The study showed a good attitude of 98(71.0%) while at least 40(29.0) had a poor attitude on family planning

Family planning practice and its utilization

Different family planning methods

Table 4: shows family planning practices and their utilization

Family planning practices	**Frequency (52)**	**Percentage**
a. using implants	07	13.5
b. using condoms	10	19.2
c. using contraceptive pills	13	25.0
d. using injectable	22	42.3

Table 4 shows different methods of family planning in regards to its utilization in which the majority 7(13.5%) of the mothers said they were using implants and 10(19.2%) of the mothers said they were using condoms. The study also showed that 13(25.0%) of the mothers who were on family planning were using contraceptive pills while at least 22(42.3%) of the mothers who were on family planning method were using injectables.

Summary table of Mothers using family planning method

Table 5: Shows the proportion of mothers using family planning

Family planning use	Frequency	Percentage
Using family planning	52	37.7
Not using family planning	86	62.3

Table 5 above shows mothers using family planning methods in which the majority of the mothers 86(62.3%) were not using family planning while at least 52(37.7%) were using family planning methods.

DISCUSSION

Knowledge of family planning and its utilization

In the study on family planning and its utilization, in which mothers were asked if they knew a method of family planning, at least 134 (97.1%) said they knew different methods of family planning. This could be because many mothers have received information about different family planning methods from peers, health facilities, or the media. When compared with other studies, a study by Shagaro et al. [26] showed that half of all women participants had heard about implants, but only 4% knew their composition, the female condom, and the rhythm method, while about four in ten knew about male sterilization, IUD, and withdrawal. Contraceptive knowledge was three times higher among currently married women than unmarried women. The study also showed that 123(89.1%) knew places where to get family planning services, while at least 15(10.9%), said they didn't know, this could be because family planning services have been established in hospitals through family planning clinics which make mothers know about the availability of these services when compared with other studies, a report by UDHS, in 2021 had shown that Individuals who have adequate information about the available methods of family planning are better able to develop a rational approach to planning their families, another study by Kibira et al [27] had recommended that it was important to provide wide access to accurate information on RH services and in particular, the benefits of seeking qualified assistance. In Uganda, family planning use increases with increasing levels of age, peaking at 38 [27]. Mothers were also asked to mention at least three types of family planning methods, of which a majority of 85 (61.6%) could mention them while 53 (38.5%) couldn't. The study shows that although mothers had basic information about family planning, they lacked detailed information about it. When this study is compared with other studies, a related study by the World Bank in 2019 also indicated that 95% of males and 93% of females knew at least one family planning method, the modern FP method [21]. In addition, modern methods are more widely known than traditional methods. For example, 96 per cent of women have heard of at least one modern method, while only 70 per cent know of a traditional method. Among all women, the male condom, pills, and injectables are the most widely known methods of family planning, with at least 90 per cent of all women saying they had heard of these methods. The study also showed that only 109 (78.0%) said they didn't know how to use a female condom, while at least 29 (21.0%) said they knew how to use it. This could be because mothers might not have been sensitized about female condom use as a form of contraception. When compared with other studies, a study by Melbostad et al. [28] showed that the pill was most widely known (males 73% and females 86%), followed by injectables (males 72% and females 86%), and the male condom (males 72% and females 52%); however, over 40% of the females didn't know how to use female condoms. The study also shows that a majority of 68 (49.3%) of the mothers said they knew how a male condom works, while 70 (50.7%) said they didn't know how to use a male condom. The study shows that using male condoms was significantly associated with family planning. This could be because male condoms are readily available and most people, including mothers, are accustomed to male condom utilization, either as a family planning method or prevention of STIs. When this study is compared with other studies, a report by UDHS in 2021 showed that knowledge of family planning is nearly universal; with 97 per cent of all women and 98 per cent of all men aged 15–49 knowing how to use a male condom, the study showed that knowledge on male condom use was significantly associated with having heard of at least one method of family planning. Moreover, knowledge is widespread, with over 90 per cent of women in all age groups, regions, and education levels having heard of at least one method; the only exceptions are women in the North (87 per cent) and those in Karamoja, only half of whom say that they know any method .

Mothers' attitude toward family planning

From the study, the majority of the mothers, 86 (62.3%), were not using family planning, while at least 52 (37.7%) were using family planning methods. This could be because mothers have not been sensitized about the benefits of using family planning services or

they have not appreciated the importance of family planning in enhancing maternal health. When this study is compared with other studies, a report by UNICEF in 2018 also showed Uganda still struggles with a low contraceptive prevalence rate (CPR) of 30%, which is lower than that of her neighbours, Kenya, Rwanda, and Tanzania, which had a CPR of 46%, 52%, and 34%, respectively, at the time of their last surveys. From the study, mothers were asked for their opinion if they thought family planning interferes with fertility, The majority of the mothers 92(66.7%) thought family planning did not interfere with fertility while 46(33.3%) thought that family planning causes infertility, the study shows a good mothers attitude since in many societies always have the myth of family planning leading to infertility which would otherwise hinder family planning utilization, when this study is compared with other studies, a study by Andi, et al, [29] in Uganda had found out that 10% of young people believed that contraceptives interfered with their fertility, and they were frightened to use something that could harm their ability to reproduce, another study Namasivayam [30] most of the married and unmarried women believed that pills burned the woman's eggs. , number of living children and desire for additional children play an important role in determining the use of family planning. The study also showed that when mothers were asked if the condom would disappear into the vagina, the majority 129(93.5%) thought that the condom could not disappear into the vagina, and only 9(6.5%) of the mothers thought it could, the study shows a good attitude on mothers on condom use, since most of them are aware the condom doesn't disappear during intercourse, this would build in confidence in mothers to utilize a condom as a family planning method, when this study is compared with other studies, the study shows a difference from a study by Broderick et al, [31] who showed that in Uganda, 4 in 50 cohort group members believed that it was potentially dangerous to use condoms because it could get stuck in the vagina cause damage. A negative attitude toward family planning is associated with rumours and myths about family planning methods and can prevent young people from seeking family planning. (Kibira R, 2020) Mothers were also asked if family planning causes cancer, in the majority, 122 (88.4%), thought that family planning did not cause cancer while at least 16 (11.6%) thought it causes cancer. This could be attributed to the numerous sensitization campaigns on family planning utilization, which make mothers have a good attitude towards family planning utilization [32]. A related study involving 600 adolescent girls showed that 13% of the female participants believed pills could cause deformed babies, an inability to get pregnant in the future, as well as cancer of the cervix and breasts. Mothers were also asked if seeking family planning methods was an embarrassing situation, and the majority (63.0%) of those who were on family planning thought it was not an embarrassment. This study shows that some mothers still have a negative attitude toward family planning, especially if they are feeling shy to discuss family planning utilization. Many sexually active young women report fear, embarrassment, or shyness about seeking family planning services.

Family planning practice and its utilization

The majority of the mothers said they were using injection contraceptive methods at 22 (42.3%), while only 7 (13.5%) of the mothers said they were using implants for family planning. The study also showed that 10 (19.2%) of the mothers who were using family planning used condoms while at least 13 (25.0%) of the mothers who were on family planning method were using different contraceptive pills, majority of the mothers using injection family planning could be because, it reduces frequent pill burden, from contraceptive pills yet it is not as invasive as requiring implants which would otherwise require a more technical person to insert them, when this study is compared with other studies, a study by [15], had, however, showed that the most commonly used methods in Ntungamo, western Uganda are pills at 13 per cent followed by implants at 12% and injectable, which are used by 10 per cent of women, Another study by [9] showed that the use of any family planning method generally rises with age, from 11 per cent among married women aged 15–19 to a peak of 29 per cent at age 40–44, and then declines to 23 per cent among women aged 45–49. The most popular methods among the youngest women are injectables and male condoms. Women in their 20s and early 30s tend to use injectables, followed by the pill, while older women are increasingly likely to be sterilized.

CONCLUSION

The study concludes that there was good knowledge of family planning at 9%. The study also concludes that there was a good attitude of 98 (71.0%) towards family planning use, in which the majority of the participants had a good attitude towards family planning utilization. The study also concludes that the use of injectable contraceptives (42.3%) was the most common method of family planning.

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