# Factors Contributing to Low Uptake of Long Acting Reversible Contraceptives among Women aged 18-45 years in Maanyi Health Centre III, Mityana District. A Cross-section Study.

**William Kateregga[a,1], Julius Oluka[a]**

[a] Kampala School of Health Sciences, P.O.Box 14623, Kampala, Uganda.

**Abstract**

**Background**:
The purpose of the study was to determine the factors contributing to the low uptake of long-acting reversible contraceptives among women aged 18-45 years in Maanyi health centre III, Mityana district.

**Methodology**:
A cross-section study design was employed as a study design with a simple random technique as a sampling technique. Data was collected from a sample of 50 respondents using a semi-structured questionnaire written in the English language as a data collection tool; later analyzed manually by use of tally sheets and presented in distribution tables and figures with the support of narratives.

**Results**:
Fear of side effects, concerns among those who were currently using a long-acting reversible contraceptive method, location of respondents home places, husbands low levels of education, and personal decisions about what type of family planning method to choose, inadequate support from friends/ relatives, inadequate counseling about LARC from health workers, long distances, long waiting time and un fully pleasant attitudes of health workers were the major factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years.

**Conclusion:**
There is a need for more information to all stake holders about low uptake of long-acting reversible contraceptives.

**Recommendation**:
The Maanyi health centre III administration should continue to conduct community outreaches in different areas women were not in favor of the methods.

**Email: kagwaliwilliam1@gmail.com Date submitted: 17th/04/2022 Date accepted: 11th/06/2022**

## 1 Background of the study

Globally, 1.1 billion women (15-49 years) needed family planning. However, in 2019 among the long-acting contraceptive users; IUDs accounted for 151 million users (20%) among married women, 8 million users among unmarried women (6%) whereas implants accounted for 5 million users among unmarried women (3%), and 18 million users (2%) among married women.

However, in Sub-Saharan Africa, the prevalence of long-acting reversible methods of contraception among women is <3%. The prevalence of contra-

ceptive implants accounted for 2% and intrauterine device (7 5% (Adedini et al, 2019

In Indonesia, 64% of currently married women aged 15-49 use contraception; 57% rely on modern contraceptive methods. Among contraceptive users, 13% use long-term methods, which include the IUD, the implant, and sterilization. Implants and IUDs are each used by 5% of women (National population and family planning board Indonesia & ICF, 2018).

Ethiopia"s population policy has been promoting the family planning method since 1989. The current proportion of SARC utilization over LARCs is 3.6-fold. In the Amhara region of Ethiopia, the modern contraception prevalence rate is 47% and LARC use accounts for just 15% of this; whereby implants users account for (9%), and the IUD (2%) (Ethiopian Public Health Institute Ethiopia & ICF, 2019).

Overall, 64% of currently married women use a method of family planning, and 48% of sexually active women use a modern method. Among the LARCs methods; implants are the most popular method used by (27%) of currently married and (22%) of sexually active unmarried (National Institute of Statistics of Rwanda & ICF, 2020).

In Uganda, utilization of modern contraceptives has steadily increased from 8% to 35% over the last decade. However, long-acting reversible contraceptives use has remained low as 7.8% with a contraceptive prevalence rate of 3.8% (IUDs) and 15.3% implants (UBOS & ICF, 2017). The specific objectives were to determine the; individual factors contributing to low uptake of long-acting reversible contraceptives among women aged 18-45 years, community-related factors contributing to low uptake of long-acting reversible contraceptives among women aged 18-45 years, and health facility-related factors contributing to low uptake of long-acting reversible contraceptives among women aged 18-45 years.

## 2 Methodology

**Study design**

The study design employed in this study was a descriptive cross-sectional study. The design was preferred for this study because it considers issues, for instance, economy, and rapid data collection. It also offered the ability to understand the population from part of it.

**Study area**

Maanyi health centre III, Mityana district "s located in Kivuuvu parish, Maanyi sub-county,

Mityana District Central part of Uganda is approximately 90 Kilometres by road from the Kampala district. The health centre receives an average of 100 patients per day with several departments namely; outpatient, inpatient, ART, Dental, Laboratory, antenatal care clinic, and minor surgery department.

**Study population**

The study population comprised women aged 18-45 years seeking family planning services in Maanyi health centre III, Mityana district.

**Sample size determination**

The sample size was calculated using Burton"s formula (1905)

S=2(QR) O: where

S=required sample size

Q=number of days the researcher took while collecting data

R=maximum number of respondents per day

O= maximum time the interviewer took on each participant.

5×10×1

=50

Therefore, a sample of 50 respondents was used.

**Selection criteria**

**Inclusion criteria**

This is composed of women aged 18-45 years seeking family planning services during the period of data collection and ready to consent.

**Exclusion criteria**

Women aged seeking family planning services during the period of data collection and not ready to consent were excluded from the study.

**Study variables**

**Dependent variable**

The dependent variable of this study was long-acting reversible contraceptives.

**Independent variables**

The independent variables of this study were individual, community-related, and health facility-related factors contributing to the low uptake of long-acting reversible contraceptives among women aged 18-45 years.

**Sampling technique**

The sampling technique is a description of strategies that the researcher uses to select representative elements/accessible populations. Therefore, the researcher used a simple random sampling

technique to get the statistical analysis related to sample distributions, hypothesis testing, and sample size. The technique was preferred because it had an unbiased representation of the population.

**Data collection tool**

Data was collected by the use of semi-structured questionnaires written in the English language with open and closed-ended questions; later translated into the local language (Luganda) primary data.

This instrument was preferred because it"s convenient, time-saving, and financial conserving making the questionnaire the most favorite instrument to help capture primary data.

**Data collection procedure**

A letter of introduction was obtained from Kampala School of Health Sciences and taken to the in-charge of Maanyi health centre III to obtain permission to conduct the research. When permission was granted; the researcher trained two research assistants about the questionnaire and how to collect the data. The sampling procedure began with explaining the purpose of the study to respondents to obtain their consent from the family planning clinic. All those who fulfilled the inclusion criteria were interviewed in a private place, Numbers were written on small pieces of paper, rolled up then mixed appropriately, and put in the box so that every respondent was requested to pick numbers from an enclosed box and those who picked odd numbers were requested to take part in the study until the sample size was achieved. The respondents were asked questions following the designed questionnaire to avoid being biased.

After the interview, each respondent was thanked for participating in the study.

**Validity and reliability**

Pretesting the questionnaire is instrumental and vital to ensure it was faultless and understandable by the respondents. The researcher prior tested the first draft of the questionnaire among 10 respondents in Kasanda health centre III. The results from the pre-tested questionnaires were used to modify the items in the instruments and prove the validity and relevance of the questionnaire. The respondents who participated in the reliability test were not included in the final study.

**Quality control**

According to the pilot survey, the contents of the data collection tools were slightly modified. Training and timely supervision were given to research assistants by the investigator.

Right respondents were selected through the inclusion and exclusion criteria with strict standard operating procedures for COVID 19.

## 3 Data analysis and presentation

Data were analyzed manually using descriptive statistics such as frequencies and percentages presented using tables and figures for easy interpretation.

**Ethical considerations**

After approval of the proposal by the supervisor, permission to collect was sought with help of an introductory letter from the Kampala School of Health sciences administration to the in-charge of Maanyi health centre III; once permission was granted, the researcher explained the study objectives to the participants and a consent form was signed by each respondent before collecting data. Information obtained from the respondents was kept confidential. This was done to ensure that the research ethics were observed throughout the study.

**Limitations of the study and their possible solutions**

1) The researcher encountered financial difficulties.

2) COVID 19 pandemic in Uganda imposed an impact on the data collection process whereby the researcher faced challenges of getting the required study participants in the specified period of data collection.

## 4 Results:

**Demographic data**

From the table above, most of the respondents (52%) were within the age bracket of 25-32 years whereas the least (6%) were within the age bracket of 18-24 years.

The study further revealed that more than half of the respondents (58%) had attained a secondary level of education whereas the least (8%) had attained a tertiary/ university level of education.

The study results in regards to marital status, the study showed that the greatest percentage of respondents (90%) were married whereas the least (4%) were widowed.

Findings related to religion showed that half of the respondents (50%) were catholic by religion whereas the least (10%) were Muslim by religion.

**Table 1.** Shows the distribution of respondents according to their demographic data (N=50)

| Variables | Frequency (f) | Percentage (%) |
|---|---|---|
| **Age of respondents** | | |
| 18-24 years | 3 | 6 |
| 25-32 years | 26 | 52 |
| 33-39 years | 15 | 30 |
| 40-45 years | 6 | 12 |
| **Total** | **50** | **100** |
| **Education level** | | |
| Never went to school | 7 | 14 |
| Primary | 10 | 20 |
| Secondary | 29 | 58 |
| Tertiary institution / University | 4 | 8 |
| **Total** | **50** | **100** |
| **Marital status** | | |
| Married | 45 | 90 |
| Single | 2 | 4 |
| Widowed | 1 | 2 |
| Separated | 2 | 4 |
| **Total** | **50** | **100** |
| **Religion** | | |
| Catholic | 25 | 50 |
| Protestant | 9 | 18 |
| Muslim | 5 | 10 |
| Others | 11 | 22 |
| **Total** | **50** | **100** |
| **Tribe** | | |
| Muganda | 30 | 60 |
| Musoga | 1 | 2 |
| Munyankole | 6 | 12 |
| Others | 13 | 26 |
| **Total** | **50** | **100** |
| **Ideal number of children** | | |
| One | 1 | 2 |
| Two | 4 | 8 |
| Three | 21 | 22 |
| Four and above | 24 | 48 |
| **Total** | **50** | **100** |
| **Number of living children** | | |
| One | 3 | 6 |
| Two | 12 | 24 |
| Three | 30 | 60 |
| Four and above | 5 | 10 |
| **Total** | **50** | **100** |

Based on tribes of respondents, the study revealed that the majority of the respondents (60%) were Baganda whereas the minority (2%) were Basoga.

Study results also revealed that most of the respondents (48%) their an ideal number of children was 4 and above whereas the least (2%) noted one child.

Concerning the number of living children, more than half of the respondents (60%) had three children whereas (6%) had one child.

**Individual factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years**

From the figure 1, the majority of the respondents (66%) had ever heard about long-acting reversible contraceptives whereas the minority (34%) had never heard about long-acting reversible contraceptives.

From the table above, more than half of the respondents (58%) obtained information about long-acting reversible contraceptives from health facilities whereas the least (6%) obtained information about long-acting reversible contraceptives from family members/ relatives.

From the figure above, half of the respondents (50%) knew implants as the type of long-acting reversible contraceptives whereas the least (6%) knew of injections.

From the table 3 the majority of the respondents (62%) reported child spacing as the reason why they use long-acting reversible contraceptives whereas the minority (4%) reported fertility control.

From the figure 3, most of the respondents (52%) had never used any long-acting reversible contraceptive method whereas the least (48%) had ever used any long-acting reversible contraceptive method.

From the table 4, more than half of the respondents (69%) reported fear of side effects as the reason why they had never used any long-acting reversible contraceptive method whereas the least (4%) reported other reasons such as negative attitude about the methods and cultural beliefs.

From the figure above, the majority of the respondents (65%) who were currently using long-acting reversible contraceptive methods were not feeling comfortable whereas the minority (35%) noted that they were feeling comfortable.

**Community-related factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years**

From the figure 5, majority of the respondents (70%) were un employed whereas the minority (6%) were employed.

From the figure 6, nearly all respondents (90%) the location of their homes where in villages whereas the least (2%) the location of their homes where in cities.

**Shows the distribution of respondents according to the education levels of their husbands**

From the table 5, most of the respondents (40%) their husbands had attained a primary level of education whereas the least (2%) their husbands had attained a tertiary institution / University level of education.

From the figure 7 , most of the respondents (54%) reported that they make their personal decision on which type of family planning method to use whereas the least (4%) make the decision jointly.

From the figure 8, the majority of the respondents (60%) never had friends/ relatives who had ever recommended them to use any type of long-acting reversible contraceptive whereas the minority (40%) had friends/ relatives who had ever recommended them to use any type of long-acting reversible contraceptive.

Shows the distribution of respondents according to whether culture/ religious beliefs prevent women from using long-acting reversible contraceptives

From the table 6, almost all the respondents (92%) disagreed that their culture/ religious beliefs prevent women from using long-acting reversible contraceptives whereas the least (8%) agreed.

**Health facility-related factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years.**

From the figure 9, most of the respondents (52%) reported tat they had never had enough counseling about long-acting reversible contraceptives whereas the least (48%) reported that they had ever had enough counseling about long-acting reversible contraceptives.

**Shows the distribution of respondents according to the distance from their homes to a nearby health facility**

From the table 7, most of the respondents (56%) reported <10 Km as the distance from their homes

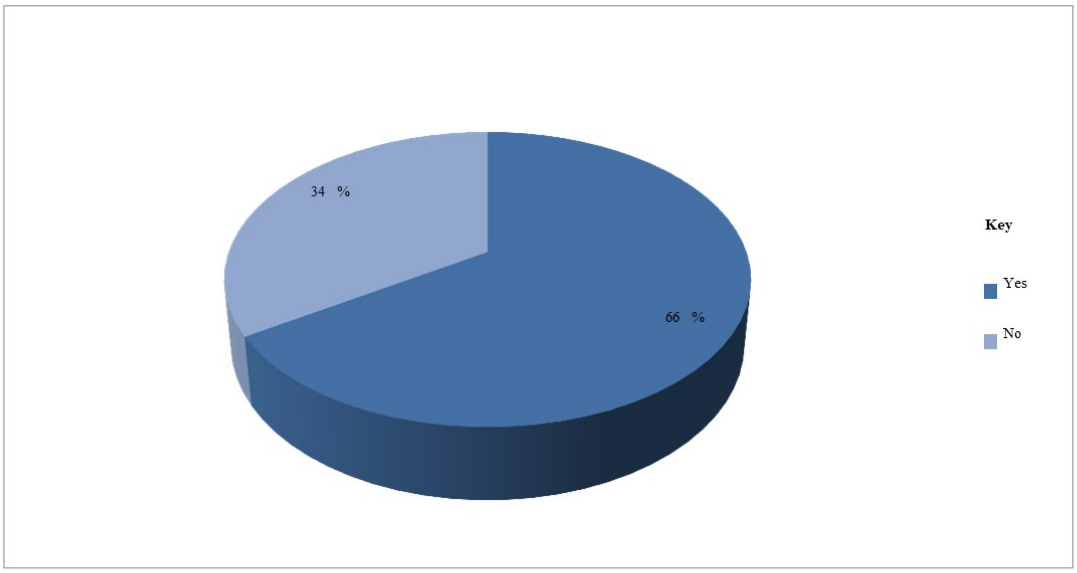


**Figure 1.** Shows the distribution of respondents according to whether they had ever heard about long-acting reversible contraceptives (N=50)

**Table 2.** Shows the distribution of respondents according to where they obtained their first information about long-acting reversible contraceptives (N=33)

| Response | Frequency (f ) | Percentage (%) |
|---|---|---|
| Health facility | 19 | 58 |
| Media | 7 | 21 |
| Family members/ Relatives | 2 | 6 |
| Others | 5 | 15 |
| **Total** | **33** | **100** |

**Table 3.** Shows the distribution of respondents according to the reasons why women use long-acting reversible contraceptives (N=50)

| Response | Frequency (f ) | Percentage (%) |
|---|---|---|
| Child spacing | 31 | 62 |
| Fertility control | 2 | 4 |
| Stop child bearing | 7 | 14 |
| Need to have smaller families | 10 | 20 |
| **Total** | **50** | **100** |

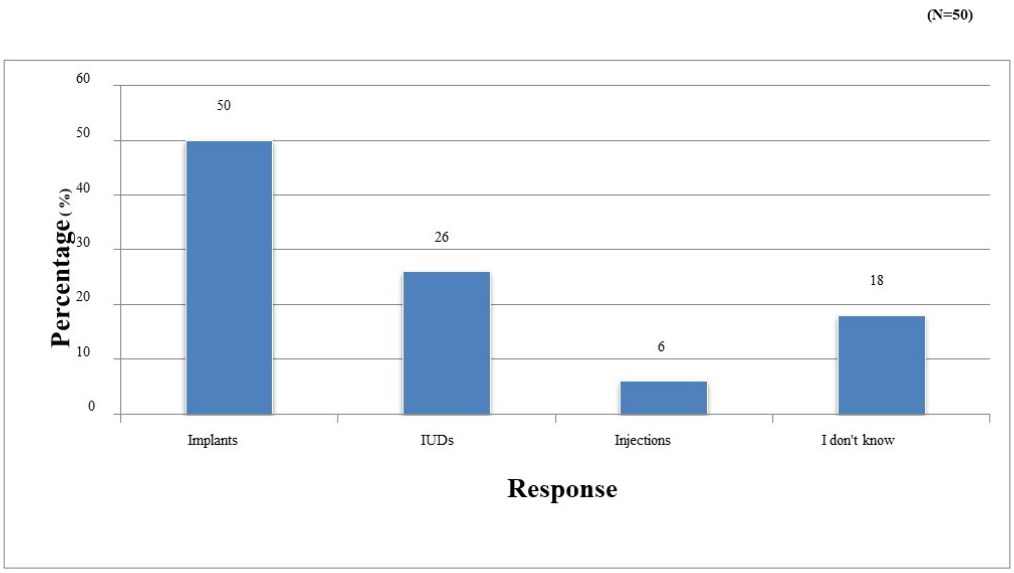


**Figure 2.** Shows the distribution of respondents according to the types of long-acting reversible contraceptives they knew.

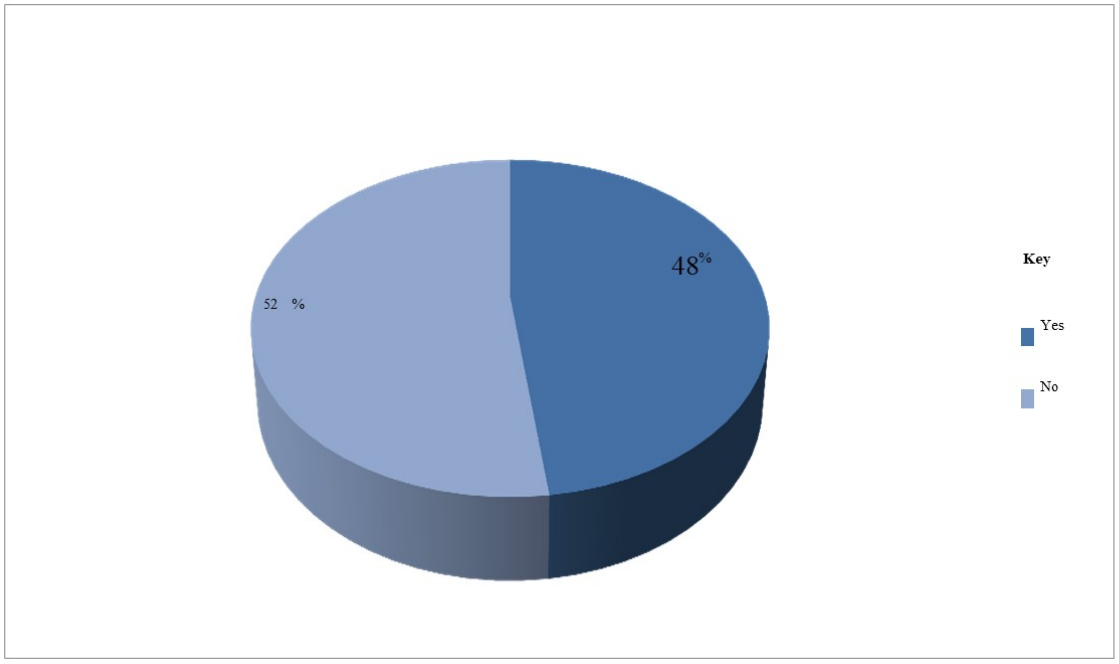


**Figure 3.** Shows the distribution of respondents according to whether they had ever used any long-acting reversible contraceptive method (N=50)

**Table 4.** Shows the distribution of respondents according to the reasons as to they had never used any long-acting reversible contraceptive method (N=26)

| Response | Frequency (f ) | Percentage (%) |
|---|---|---|
| Fear of side effects | 18 | 69 |
| Husband"s disapproval | 5 | 19 |
| Fear of infertility after use | 2 | 8 |
| Others | 1 | 4 |
| **Total** | **26** | **100** |

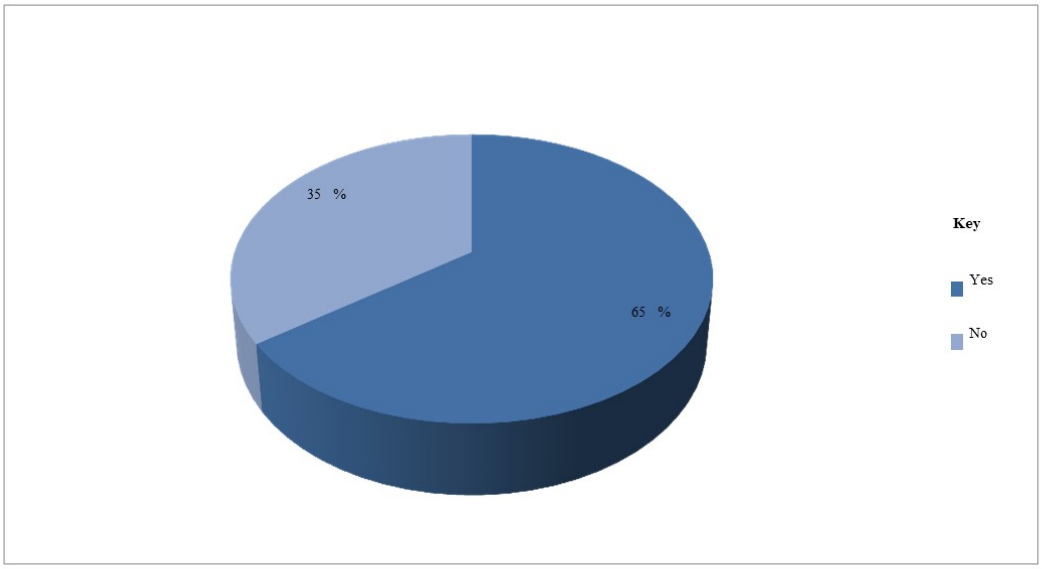


**Figure 4.** Shows the distribution of respondents who were currently using a long-acting reversible contraceptive method, according to whether they were feeling comfortable with a particular method (N=26**)**

**Table 5. Shows the distribution of respondents according to the education levels of their husbands**

| Husband's education levels | Frequency (f ) | Percentage (%) |
|---|---|---|
| Never went to school | 11 | 22 |
| Primary | 20 | 40 |
| Secondary | 18 | 36 |
| Tertiary institution / University | 1 | 2 |
| **Total** | **50** | **100** |

**Table 6.** Shows the distribution of respondents according to whether culture/ religious beliefs prevent women from using long-acting reversible contraceptives

| Response | Frequency (f ) | Percentage (%) |
|---|---|---|
| Yes | 4 | 8 |
| No | 46 | 92 |
| **Total** | **50** | **100** |

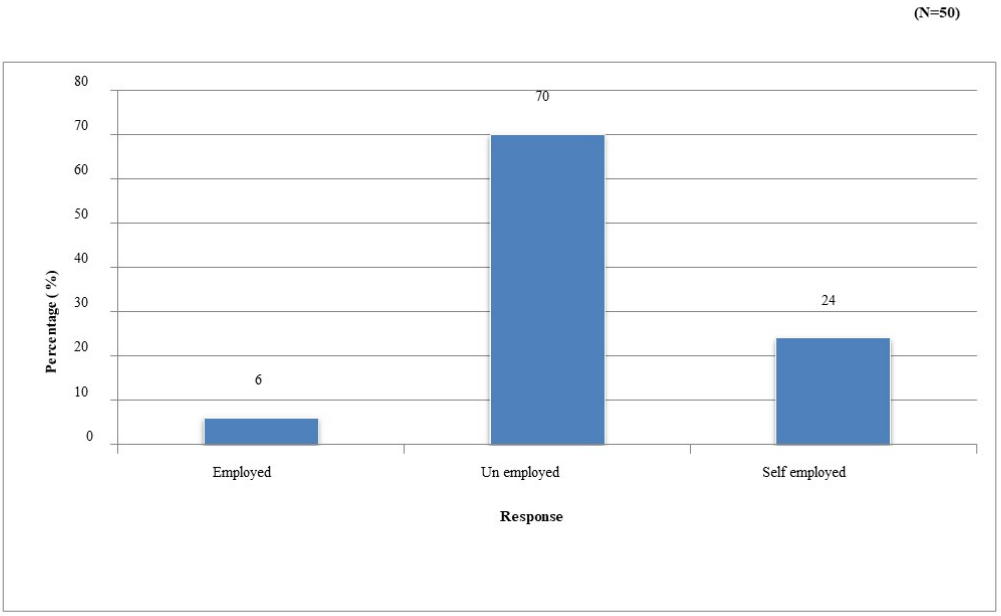


**Figure 5.** Shows the distribution of respondents according to their employment status.

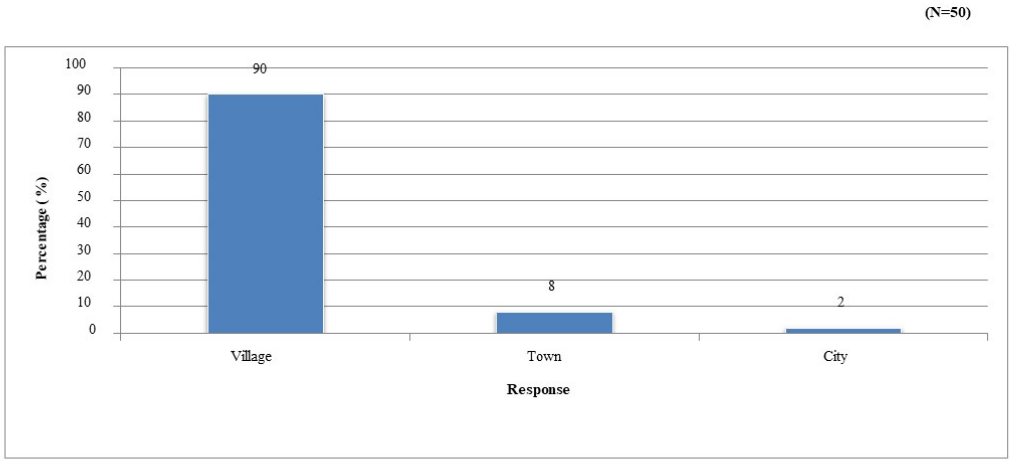


**Figure 6.** Shows the distribution of respondents according to the location of their homes

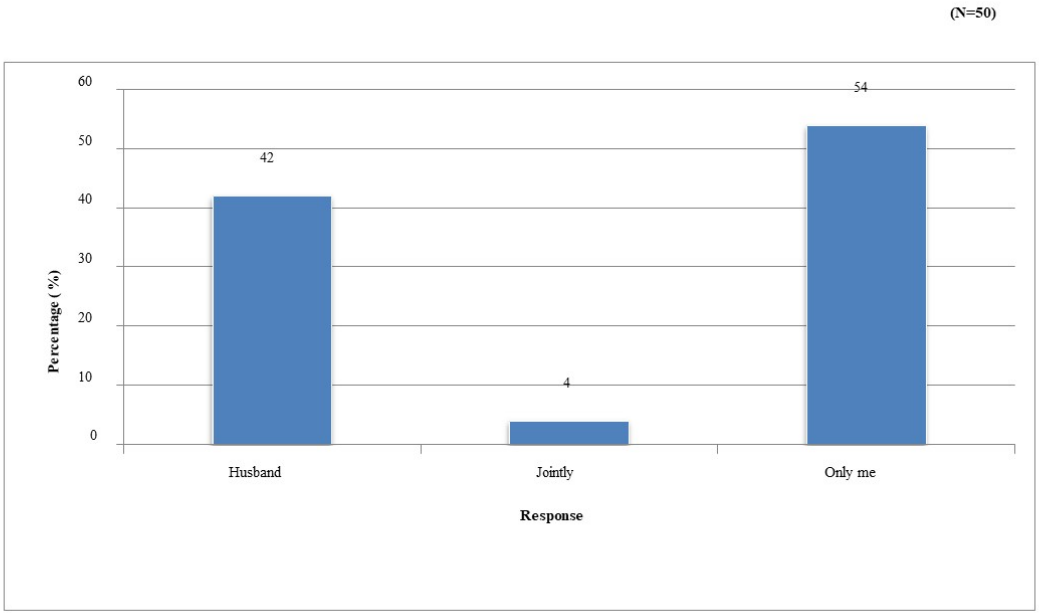


**Figure 7.** Shows the distribution of respondents according to who makes the decision on which type of family planning method to use

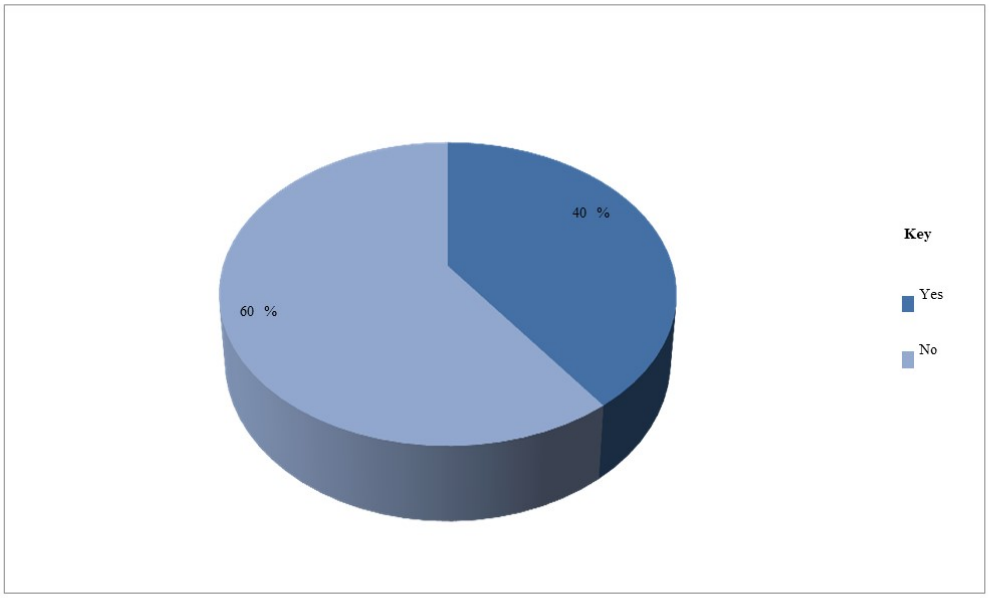


**Figure 8.** Shows the distribution of respondents according to whether they have friends/ relatives who had ever recommended them to use any type of long-acting reversible contraceptive

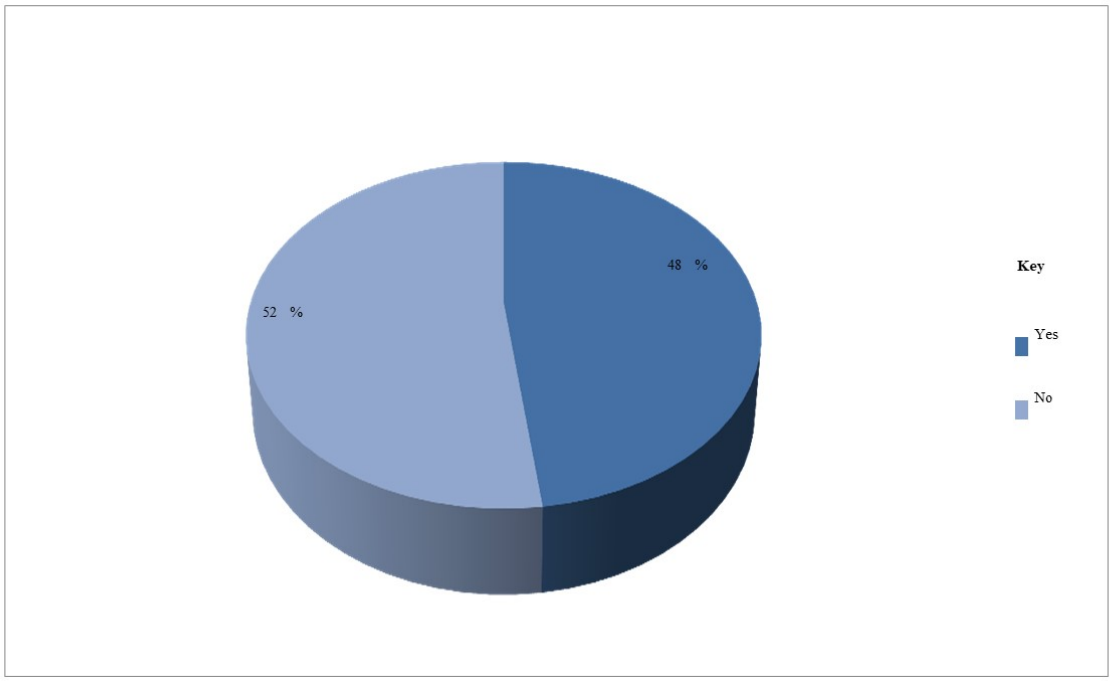


**Figure 9.** Shows the distributionof respondents according to whether they had ever had enough counseling aboutlong-acting reversible contraceptives

**Table 7. Shows the distribution of respondents according to the distance from their homes to a nearby health facility**

| Distance | Frequency (f ) | Percentage (%) |
|---|---|---|
| <10 Km | 28 | 56 |
| >10 Km | 22 | 44 |
| **Total** | **50** | **100** |

to the nearby health facility whereas the least (44%) noted >10 Km.

From the figure 10, most of the respondents (58%) reported >1 hour as a period they take for them to access family planning services in Maanyi health centre III whereas the least (42%) reported < 1 hour.

**Shows the distribution of respondents according to whether the facility provides enough access to long-acting reversible contraceptives**

From the table 8, most of the respondents (40%) were not sure if the facility provides enough access to long-acting reversible contraceptives whereas the least (26%) reported that the facility does not provide enough access to long-acting reversible contraceptives.igure 11: Shows the distribution of respondents according to how they rate the attitude of health service providers towards women seeking family planning service

From the figure 11, more than half of the respondents (56%) reported that the attitude of health service providers towards women seeking family planning services it is fair whereas the least (8%) noted that it is poor.

# 5 Discussion, Conclusion, and Recommendations

**Discussion**

**Individual factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years**

Findings obtained from the study showed that the majority of the respondents (66%) had never heard about long-acting reversible contraceptives.

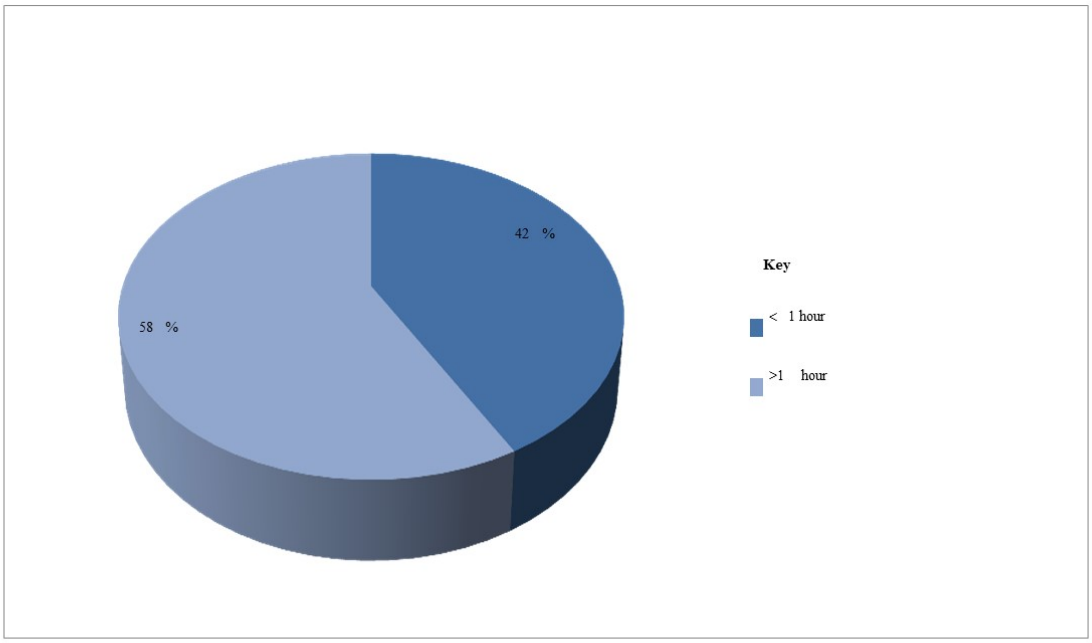


**Figure 10.** Figure 10: Shows the distribution of respondents according to how long does it take for them to access family planning services in Maanyi health centre III **(N=50)**

**Table 8. Shows the distribution of respondents according to whether the facility provides enough access to long-acting reversible contraceptives**

| Response | Frequency (f ) | Percentage (%) |
|---|---|---|
| Yes | 17 | 34 |
| No | 13 | 26 |
| Not sure | 20 | 40 |
| **Total** | **50** | **100** |

This implies that most of the study participants were responsive to long-acting contraceptives. The study results were in agreement with a study that was conducted by Gashaye *et al,* (2020), where findings revealed showed that [92%] of all participants had ever heard about LARCs.

However, most of the respondents (52%) had never used any long-acting reversible contraceptive method. This could probably be attributed to some reasons the study is yet to establish. This was inconsistent with a study that was done by Eisenberg *et al.* (2015), where results showed that (64%) had ever used IUDs;

To add to that, more than half of the respondents (69%) reported fear of side effects as the reason why they had never used any long-acting reversible contraceptive methods. This reveals that most of the study participants had poor perceptions about the methods which influenced low-up take. The study findings were in agreement with Gebremichael et al (2014), where results showed that (44.8%) noted side effects as the reason why they had never used LARC.

Among the study participants who had ever used LARC, the majority of the respondents (65%) of respondents were not feeling comfortable, and this paved way for discontinuity. This was also in agreement with Emily & Anwarul (2017), where 55.1%, 51.0%, and 52.4% of participants noted that IUD, hormonal IUD, and implant were associated with an uncomfortable/ painful insertion or removal process.

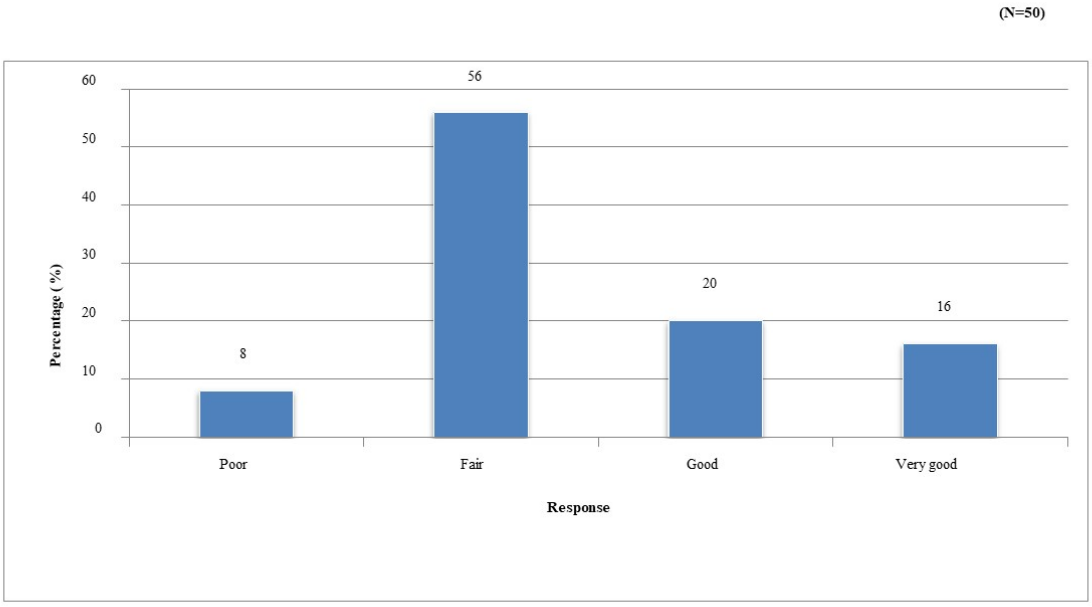


**Figure 11.** Shows the distribution of respondents according to how they rate the attitude of health service providers towards women seeking family planning service

**Community-related factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years**

Because of the study findings, the majority of the respondents (70%) were unemployed. This reveals that most of the women had difficulties meeting certain costs such as transport costs that would have enhanced access to services. The current findings were in disagreement with Obasanjo *et al* (2020), where results regarding the wealth index showed that 43.1% were from wealthy households.

Furthermore, nearly all respondents (90%) the location of their homes were in villages. This is attributed to the fact that the study was conducted in a study area that is not urban-based and therefore, most of the study participants' location of their homes had to be in villages where access to timely medical services tends to be inadequate compared to urban-based areas. The study results were in line with Leevan *et al,* (2017), where results showed that the overall prevalence of ever-use of LARC was low at 23.3%, with a relatively higher prevalence (31.7%) among rural than urban clients (19.2%).

Findings also showed that most of the respondents (40%) of their husbands had attained a primary level of education. Therefore, this implies that husband"s levels of education impact a significant impact on the use of family planning methods, and in most cases, those with low levels of education are most likely not to allow their wives to utilize family planning methods since they have inadequate knowledge about family planning. The study findings were in disagreement with Anguzu *et al* (2014), where (60%) of the women their husband had secondar level of education.

The study showed that most of the respondents (54%) reported that they make their personal decision on which type of family planning method to use. This indicates that personal decisions on what type of family planning influenced women to opt for other methods than LARC. The study results were in disagreement with Mojgan *et al.,* (2020), where results showed that 69% of respondents reported that husband and wife both decided on the use of contraceptives.

Results discovered from the study indicated that the majority of the respondents (60%) had never had friends/ relatives who had ever recommended them to use any type of long-acting reversible contraceptive. This signifies that their colleagues had not perceived LARC methods to be effective and hence paving the way to low uptake of the methods.

The study results were in disagreement with Bikorimana (2015), where findings showed that 52.1% of respondents had ever been recommended by their colleagues to use any type of LARC.

**Health facility-related factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years**

The study showed that most of the respondents (52%) reported that they had never had enough counseling about long-acting reversible contraceptives from health workers. This could probably be attributed to the fact that very few women were willing to use family planning services. The study results were inconsistent with Tebeje & Workneh (2017), where results revealed that (72%) had never had enough counseling services from health workers regarding LARC.

The current study findings showed that most of the respondents (56%) reported <10 Km as the distance from their homes to the nearby health facility and this indicates that women had to travel long distances yet were unemployed which also influenced low uptake of the LARC. The study findings were in line with Walelign et al (2018), where results showed that 63% of married child-bearing age women reported > 1 km to reach the nearest health centre.

Most of the respondents (58%) reported >1 hour as a period they take for them to access family planning services in Maanyi health centre III. This implies that study participants took a long to get access to family planning services hence paving way for low utilization. The study results were in agreement with Muthee (2016), where findings showed that 55% of the respondents who used long-term methods felt that waiting time was too long.

The study showed that most of the respondents (40%) were not sure if the facility provides enough access to long-acting reversible contraceptives. This could be due to low sensitization mechanisms at the facility. The study results were not in line with Mussie et al (2012), where the majority (83.3%) of the married women got enough services from a public institution.

Results from the study showed that more than half of the respondents (56%) reported that the attitude of health service providers towards women seeking family planning services was fair. Therefore, unfavorable attitudes of health workers hindered the uptake of LARC. The study results were inconsistent with Tariku & Belay (2018), where findings revealed that (70%) of the women complained about the poor attitudes of health workers most especially in public facilities.

## 6 Conclusion

Based on the study findings, the researcher discovered fear of side effects as was confirmed by (69%) of respondents, and concerns from among those who were currently using long-acting reversible contraceptive methods as (67%) noted that they were feeling uncomfortable were the major individual factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years.

The researcher also noticed low employment levels (70%) of women were unemployed, the location of respondents"s homes places as (90%) the location of their homes where in villages, husband"s low levels of education (40%) their husbands had attained primary level of education, personal decision about what type of family planning method to choose as noted by

(54%) , inadequate support from friends/ relatives as reported by (60%) of respondents were the community-related factors contributing to the low utilization of long-acting reversible contraceptives among women aged 18-45 years.

The study also discovered inadequate counseling about LARC as noted by (52%), long distances as reported by (56%) reported <10 Km the distance from their homes to the nearby health facility long waiting time as reported by (58%) who reported >1 hour as a period they take for them to access family planning services in Maanyi health centre III and un fully pleasant attitudes of health workers as reported by (56%) who noted that attitude of health service providers towards women seeking for family planning services was fair where the health facility-related factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years.

Therefore, the researcher generally concluded that fear of side effects, concerns among those who were currently using a long-acting reversible contraceptive method, location of respondents"s home places, husbands "s low levels of education, and personal decisions about what type of family planning method to choose, inadequate support from friends/ relatives, inadequate counseling about LARC from health workers, long distances,

long waiting time and un fully pleasant attitudes of health workers were the major factors contributing to low utilization of long-acting reversible contraceptives among women aged 18-45 years.

**Recommendations**

The Ministry of Health should carry out extensive education and communication programs in different parts of the country especially in rural areas to address many misconceptions and myths about all family planning methods since most of the women had never used long-acting contraceptives.

The government should allocate more health facilities for better access to family planning services with enough health workers and this will reduce more costs of transport and delays which women complained about.

Maanyi health centre III administration should continue to conduct community outreaches in communities targeting spouses through couple counseling towards LARC to address side effects and partner-related noted barriers since most of the women were not in favor of the methods.

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## 7 List of Abbreviations

DMPA : Depo Medroxyprogesterone Acetat

IUCDs : Intra Uterine Contraceptive Device

ICF : International Classification of Functioning

IUD : Intra Uterine Device

LARC : Long Acting Reversible Contraceptives

LARCMs : Long Acting Reversible Contraceptives Methods

MoH : Ministry of Health

SARC : Short Acting Reversible Contraceptives

UBOS : Uganda Bureau of Statistics

UNICEF : United Nations Childrens Fund

WHO : World Health Organization

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