

**FACTORS INFLUENCING UTILIZATION AND CHOICE OF MODERN
CONTRACEPTIVES AMONG WOMEN ATTENDING FAMILY
PLANNING CLINIC AT ARUA REGIONAL REFERRAL HOSPITAL**

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ABSTRACT

Background: In developing countries, the woman's decision on which contraceptive method to use, if any at all, is either a collective decision with the partner or is completely dependent on the male partner's choice and preference. In developing countries, modern contraceptive use is adversely affected by myths, beliefs and fears on perceived side effects together with the need to stick to the traditional methods. In Uganda, the same has been the case over the years, deterring potential users from using particular contraceptive methods over others. Hesitance, or complete unwillingness by the male partner to embrace contraceptive methods has also played a big role in adversely affecting use. In Arua, modern contraceptive use is predicted to be low but data on this is scanty warranting a study on the utilization and factors associated with modern contraceptive methods among the reproductive-age women attending FP clinic at Arua Regional Referral Hospital.

Objective: was to assess utilization and factors affecting utilization and choice of modern contraceptive methods among women of reproductive age in in Arua.

Method: A descriptive cross-sectional study that involved 335 women of reproductive age in and which utilized a researcher-administered questionnaire.

Results: A total of three hundred and thirty-five (335) women took part in the study. The factors affecting utilization were knowledge concerning modern contraceptive methods, marital status, residence, number of children alive, employment status and religion significantly affecting utilization, whereas level of education was found statistically insignificant. The modern contraceptive methods used were the condom (56.10%) because of the ready availability, the pill (25.61%) they cited that they chose the option due to its easy reversibility in that its effects quickly wane after stopping to take them. They also said that it was less invasive compared to the alternatives they might opted for, injectable (13.42%) users said that they like the method given that it gives them some sense of control over their reproductive life and also the convenience of a single injection covering them for a long time and lastly IUDs (4.87%) chose the method based on its prolonged effectiveness as long as it has been inserted.

Conclusion: The study set out to identify the factors affecting utilization which included knowledge, residence, age, number of live children, religion and marital status. A sense of control over one's reproductive life, convenience, ease of access and use, long-term effectiveness, easy reversibility and resumption of fertility and fear of side effects (perceived or real), were the factors that influenced the choice of a particular modern contraceptive method over another.

DECLARATION

I declare that this research dissertation has never been presented to any institution for any award or qualification whatsoever. Wherever the works of other people have been included, due acknowledgement to this has been made in accordance with the appropriate referencing and citations. The findings and the analysis that will result from this research project will be my original information.

Researcher: **Eyotaru Peace Oliver, BMS/0061/133/DU**

Signature

Date

APPROVAL

This is to certify that this research dissertation has been prepared under my supervision and has never been submitted anywhere for any other purpose and is now ready for submission to the Faculty of Clinical Medicine and Dentistry of Kampala International University for further consideration.

Supervisor: **Dr. Ddamulira Adam, Consultant Obstetrician and Gynecologist**

Signed.....

Date.....

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	:	Acquired Immunodeficiency Syndrome
ARRH	:	Arua Regional Referral Hospital
FP	:	Family planning
HIV	:	Human Immunodeficiency Virus
IREC	:	Institute Research and Ethics Committee
IUD	:	Intra-uterine Device
KIU	:	Kampala International University
LARC	:	Long-acting Reversible Contraceptives
MOH	:	Ministry of Health
SDA	:	Seventh Day Adventist
SDG₃	:	Sustainable Development Goal Three
SDG₄	:	Sustainable Development Goal Four
UBOS	:	Uganda Bureau of Statistics
UDHS	:	Uganda Demographic and Health Survey

OPERATIONAL DEFINITIONS

Contraception	: the deliberate use of artificial methods or other techniques to prevent pregnancy as a consequence of sexual intercourse.
Contraceptives	: Methods used to stop pregnancy.
Family Planning Clinic	: Outpatient clinic where women receive contraceptive services
Modern contraceptives	: methods that are used to stop pregnancy such as IUDs, Implants, Injectables, Oral contraceptive pills
Reproductive age	: between (15 – 49 years) according to World Health Organization, 2016

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CHAPTER ONE: INTRODUCTION

1.0.BACKGROUND

According to WHO, the global unmet need for contraceptives is still high despite much efforts to reverse this. So many sexually active individuals are not using any contraceptive methods more so in the majority of the world's poorest countries where it has been observed that contraceptive utilization is low and the unmet need for family planning is high (Brown et al., 2014).

In developing countries, the woman's decision on which contraceptive method to use, if any at all, is either a collective decision with the sexual partner or is completely dependent on the male partner's choice and preference. This is so for any other issue that affects the woman's reproductive life (Bogale, Wondafrash, Tilahun, & Girma, 2011).

Contraceptive use is advocated to protect against unwanted pregnancies and sexually transmitted disease as well as preventing unsafe abortions, which contribute to high mortality. Unwanted pregnancies have also cut short the educational aspirations of affected young girls in many regions of Africa (Afolabi et al., 2015). Despite improvements in contraceptive use witnessed in some regions of the world, some countries – most of them in Africa – still have low utilization in terms of contraceptive use (Brown et al., 2014).

As per the 2016 Uganda Demographic and Health Survey (UDHS), more than four in 10 births are unplanned. Ugandan women, on average, give birth to nearly two children more than they want. The difference—which represents one of the highest levels of excess fertility in Sub-Saharan Africa—illustrates just how difficult it is for women to meet their fertility desires (Rutaremwana et al., 2015). The overall fertility in Uganda is 5.4 children per woman with it being higher in rural than urban women. More importantly, 25 percent of adolescents aged 15-19 years in Uganda have begun childbearing: 19 percent of women age 15-19 have given birth, and another 5 percent are pregnant with their first child. A worrying, but expected trend, is that adolescent childbearing is more common in rural than in urban areas (Uganda Bureau of Statistics Kampala, 2017). We should not forget that Uganda's rate of mortality associated with pregnancy and childbearing is 0.63 maternal deaths per 1,000 woman-years of exposure (Uganda Bureau of Statistics Kampala, 2017) – deaths that can be reduced or prevented all together if pregnancies are properly planned and timed through contraceptive use.

Despite the fact that a majority (85%) of Ugandan married women want to space their next childbearing or completely cease giving birth, only 39% are currently using a family planning method;

be it modern (35%) or traditional (4%). This creates an unmet need for contraceptives that has been estimated to be 28% among married women and 32% among sexually active unmarried women (Uganda Bureau of Statistics Kampala, 2017).

Among married women, the most popular methods are injectables (19 percent) and implants (6 percent) while the most commonly used methods among sexually active unmarried women are injectables (21 percent) and male condoms (14 percent) (Uganda Bureau of Statistics, 2016).

In the West Nile region, cases of early and unplanned pregnancies are an issue of concern. About 22.4% of adolescent girls between the ages of 15 and 19 years have started childbearing, with 19.3% having had a live birth and 3% being pregnant with their first child (Uganda Bureau of Statistics Kampala, 2017). This exposes these young girls to complications brought about by early pregnancy, childbirth and motherhood. Further complications may arise through attempts at pregnancy termination. The study aimed at looking at factors associated with utilization and choice of modern contraceptive methods among women attending family planning clinic at ARRH.

1.0.PROBLEM STATEMENT

So many factors affect use of modern contraceptives among them being lack of proper information and existing negative myths and misconceptions that surround modern contraceptives (Gueye, Speizer, Corroon, & Okigbo, 2015).

The fear of side effects and adverse reactions have been a major barrier to use with the biggest fear being that a particular method would cause infertility. Many of these fears are based on myths and misconceptions borne from information obtained chiefly from social networks (Ochako et al., 2015). These fears often drive women into relying on less effective traditional methods such as withdrawal and rhythm methods (Ajayi, Adeniyi, & Akpan, 2018).

The perception that most Ugandan women have that modern contraceptive services and commodities are inaccessible and not for the poor, that it is not easy to discuss sexual matters with their partners and some even perceiving contraceptive use as wrong have hindered their utilization (Nsubuga, Sekandi, Sempeera, & Makumbi, 2016). Among all the factors though, lack of participation of the male partner in reproductive health matters or outright refusal and forbidding, have hindered Ugandan women from going for family planning services (Kabagenyi, Jennings, et al., 2014).

Among the factors that make Ugandan women opt for a particular modern contraceptive method over the other include longer protection, better child-spacing and effectiveness (for the long-acting reversible contraceptive methods) whereas for the short acting modern contraceptives, choice was informed by ease of access, lower cost, privacy, perceived fewer side effects and freedom to stop using a method without involving the health provider. On the other hand, the need for a client-controlled method and the desire to conceive in the near future deterred potential users from opting for the long-acting reversible contraceptive methods (LARC) (Tibaijuka et al., 2017).

For instance, lack of IUD-specific knowledge and provider discomfort with insertion have been shown to contribute to lack of IUD use (Robinson, Moshabela, Owusu-Ansah, Kapungu, & Geller, 2016). Shame has also been reported to significantly prevent use of family planning (especially condoms), particularly for unmarried youth. Women who carry condoms are perceived as promiscuous, and asking a partner to use condoms would portray one as sexually wayward or untrustworthy (Ochako et al., 2015). This study aimed to provide information that will attempt and fill the information gap that exists on the subject matter.

1.1.STUDY OBJECTIVES

1.1.1. BROAD OBJECTIVE

To assess the factors influencing utilization and choice of modern contraceptive methods among women attending family planning clinic at ARRH.

1.1.2. SPECIFIC OBJECTIVES

- 1) To identify the factors that affect utilization of modern contraceptive methods among women of reproductive age at ARRH.
- 2) To identify the factors that influence choice of method of modern contraceptives among women of reproductive age at ARRH.

1.2.RESEARCH QUESTIONS

- 1) What are the factors that affect the utilization of modern contraceptives among women of reproductive age at ARRH?
- 2) What are the factors that influence choice of method of modern contraceptive among women of reproductive age at ARRH?

1.3.JUSTIFICATION OF THE STUDY

The information obtained from the study will benefit the women of reproductive age in Arua in that it will inform intervention and counselling on the benefits and choices of family planning available to them while at the same time clarifying any myths, they might have had concerning modern contraceptive methods. This will see an increase in the number of women visiting FP clinics and seeking family planning. Furnished with the correct information concerning FP methods, the women will make informed decisions on which methods will be of benefit to them. This will increase the utilization of modern contraceptives within the community and thus reduce cases of unplanned, often unwanted, pregnancies and consequently reduce the complications that come with them. With families that are properly timed, spaced and planned, the task of providing for their needs becomes less of a burden and this translates to an improved status of living. People will be able to give birth to the number of children they can adequately provide for and overall, families will be happier. With planned families, proper population growth projections are possible and thus the government can adequately plan and allocate resources.

1.4.STUDY SCOPE

1.4.1. GEOGRAPHICAL SCOPE

Arua Regional Referral Hospital, commonly known as Arua Hospital is a hospital in the town of Arua, in Northern Uganda. It is the referral hospital for the districts of Adjumani, Arua, Koboko, Maracha, Moyo, Nebbi, Yumbe, and Zombo. The hospital also receives referrals from neighboring parts of South Sudan and the Democratic Republic of the Congo. It is a public hospital, funded by the Uganda Ministry of Health and general care in the hospital is free. It is one of the thirteen (13) Regional Referral Hospitals in Uganda. The hospital is designated as one of the fifteen (15) Internship Hospitals in Uganda where graduates of Ugandan medical schools can serve one year of internship under the supervision of qualified specialists and consultants. The bed capacity of Arua Hospital is quoted as 272.

1.4.2. CONTENT SCOPE

The study is about the utilization and factors associated with utilization and choice of modern contraceptive methods.

1.5.CONCEPTUAL FRAMEWORK

Here the study looked at socio-demographic factors, socio-economic factors, interaction with the health system, access to media, and behavioural/attitudinal factors as the main potential influencers of modern contraceptive use among women. The socio-demographic factors are hypothesized to operate directly to influence modern contraceptive use, and so do socio-economic factors, interaction with the health system, behavioral/attitudinal factors and the factors related to access to media. All the above-named factors are the independent variables whereas modern contraceptive use is the dependent variable. The outcome is a reduction of unwanted pregnancies with all the benefits that come with that such as a reduction in illegal abortions, school dropouts and a bettering of the conditions of living from families that are manageable.

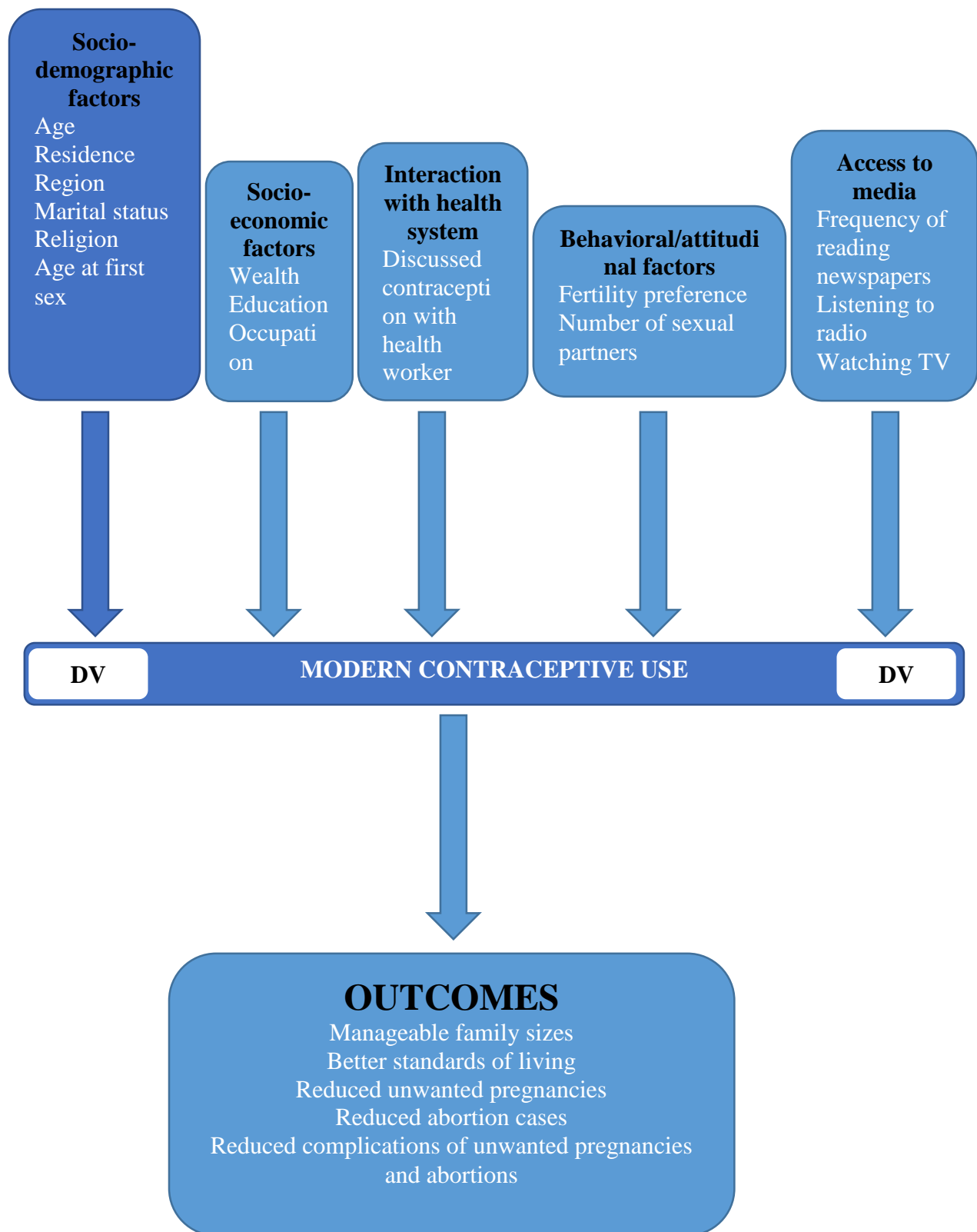


Figure 1: Conceptual Framework on Factors Associated with Utilization of Modern Contraceptive Methods; Adopted from Ochako et, al, 2017

CHAPTER TWO: LITERATURE REVIEW

2.0. INTRODUCTION

This chapter deals with the literature reviewed on the utilization of modern contraceptive methods, factors associated with utilization and choice of the modern contraceptives.

2.1. UTILIZATION OF MODERN CONTRACEPTIVE METHODS

Utilization of modern contraceptives is low especially in developing countries where the burden of unplanned and ill-spaced pregnancies together with morbidity and mortality that result from sexually transmitted infections, the HIV/AIDS scourge included, is unacceptably high (Gakidou & Vayena, 2013), reports that have also been supported by (Igbodekwe et al., 2014).

Findings from rural Lagos, Southwest of Nigeria showed that there was a discrepancy in modern contraceptive use among married and single women in May of 2015. The overall utilization of contraceptive use was 51.9% with nonuse of contraceptives among married women being 43% and 67% among singles (Afolabi et al., 2015).

In 2015, findings of a study that was conducted in 2008 assessing contraceptive use among adolescents (15 – 19 years) in Ghana was published in the BMC women's health journal. It was found out that the overall contraceptive utilization in the sample of 1037 women was 18.3 % comprising 14.6 % of modern methods and 3.7 % of traditional methods (Nyarko, 2015).

A study was conducted in Ethiopia to compare the utilization of modern contraceptives in 2011. It compared two cohorts; those from urban and those from rural settings. The study found that current modern contraceptive use among married women in the urban area was 293 (87.5%) and 243 (72.8%) in rural areas (Bogale et al., 2011). Still in Ethiopia in 2014, another study tried to assess the utilization of permanent and long acting modern contraceptive methods and they found the coverage to be 20% (Asiimwe, Ndugga, Mushomi, & Manyenye Ntozi, 2014). Abebaw and colleagues in 2011 did an analytical survey in Ethiopia on the changing trends in utilization of modern contraceptives among women of reproductive age. The years under study were from 2000 to 2011 and they found that modern contraceptive utilization increased from 6% in 2000 to 16% in 2005 and to 36% in 2011. This still was a low utilization (Worku, Tessema, & Zeleke, 2014)(Worku, Tessema, & Zeleke, 2015). Qazi and Hashmi compared the methods of contraceptive use among women in 2010 and they found that most women preferred modern methods as compared to traditional ones; Modern contraceptive method was used by 216 (75%) and traditional method by 72 (25%) (Qazi, Hashmi, Raza, Soomro, & Ghauri, 2010).

Recent studies have indicated an upward trend in utilization of modern contraceptives among Ugandan women, more so among the married ones. According to UBOS, modern contraceptive use among married women increased from 18% in 2000 to 26% in 2011 but among sexually active unmarried women, it remained at 44% in the same time period (Guttmacher Institute, 2013).

Jimmy Ronald and his colleagues from Makerere University published their findings on a study they conducted that assessed trends in modern contraceptive use among women from 1995 – 2011. Though they recorded an upward trend in modern contraceptive use - from 11.6% in 1995 to 32.1% in 2011, (Andi, Wamala, Ocaya, & Kabagenyi, 2014) this level is still very low.

2.2. FACTORS ASSOCIATED WITH UTILIZATION AND CHOICE OF MODERN CONTRACEPTIVE METHODS

So many factors play a role in the choice to use and which method to choose from among the modern contraceptive methods. Knowledge, gender equitable attitude, residence (whether rural or urban), empowerment in decision-making, fear, social economic status, marital status, religion etc. all influence contraceptive methods utilization.

In an Indian study published in 2015, Caste, religion, education, current age, age at marriage, media exposure and zonal classification were found to be significant whereas rural v/s urban residence was found to be insignificant (Pandey & Singh, 2015).

In Ghana in the same year, age, education, work status, knowledge of ovulatory cycle, marital status, and visit to a health facility were significant in influencing contraceptive choice and use (Nyarko, 2015).

In Ethiopia studies have shown urban women have better power to make decisions on modern contraceptive use than rural women (Bogale et al., 2011). Level of education, occupation, number of live children, joint fertility related decisions, ownership of a radio or TV, discussion with health care provider (Melka, Tekelab, & Wirtu, 2015). Deribe and friends in 2013 published that being wealthy, more educated, being employed, having higher number of living children, being in a monogamous relationship, attending community conversation, and being visited by a health worker at home strongly predicted use of modern contraception. While, living in rural areas, older age, being in polygamous relationship, and witnessing one's own child's death were found negatively influence modern contraceptive use (Lakew, Reda, Tamene, Benedict, & Deribe, 2013). In Melo Koza, Woreda in Southern Ethiopia in 2015, Being older age, being educational level of secondary and above, fewer possession of cattle, being aged 18 years and above at first marriage,

absence of died children, having six or more children, desiring less than six children, considering modern contraceptive as unwanted pregnancy preventer, supported by their husband to use contraceptive and inter-spousal communication about family planning were significantly associated with increased modern contraceptive service utilization (Tobe, Nahusenay, & Misker, 2015).

A Tanzanian study in 2015 found partner age difference and partner's education status to be significant (Kidayi et al., 2015).

In a most recent study in Kenya in 2017, region of residence, marital status, religion, wealth, interaction with a health care provider, fertility preference, number of sexual partners and access to media were all significantly associated with modern contraceptive use among both men and women within the reproductive age (Ochako, Temmerman, Mbondo, & Askew, 2017).

In Uganda, Distance from health facility, listening to the radio, geographical differences, education level, and desire to have children after two years (Asiimwe et al., 2014) were shown to be significant choosing to utilize modern contraceptives and the actual method to take up. In the Makerere study of July 2014 by Jimmy Ronald and friends, higher education, urban residence, higher wealth quartile, and higher numbers of surviving children promoted utilization of modern contraceptives whereas being married or cohabiting lowered utilization (Andi, Wamala, Ocaya, & Kabagenyi, 2014).

CHAPTER THREE: METHODOLOGY

3.0.INTRODUCTION

This chapter describes the study area focusing on population structure and many other aspects including study design, sample size determination, sampling method, selection criteria, data Collection, data analysis, data presentation, data quality control, study limitation and Ethical consideration.

3.1. STUDY DESIGN

A descriptive cross-sectional study survey with both qualitative and quantitative approaches was used.

3.2. STUDY POPULATION

Women of reproductive age (15 – 49 years) visiting family planning clinic at ARRH.

3.3. SAMPLING TECHNIQUE

Convenient consecutive sampling technique with sequential recruitment was used whereby participants were chosen as they met the inclusion criteria until the sample size was achieved.

3.4. DATA COLLECTION METHOD

A researcher-administered questionnaire was used for the study. With the help of three assistants who were fluent in both English and the local language, the researcher asked respondents questions as per the objectives of the study and later analyze and interpreted the data. Where more information was needed the researchers asked clarifying questions.

3.5. INCLUSION CRITERIA

All women within the reproductive age visiting family planning clinic at ARRH at the period of the study and who offered consent were recruited.

3.6. QUALITY CONTROL

The questionnaire was pre-tested before the main study and 3 research assistants were recruited according to their command of both English and vernacular. They were then adequately trained as per the requirements of the study and objectives to be met.

3.7. DATA ANALYSIS

Each questionnaire was checked and verified for completeness, missing values and unclear responses and then manually cleaned up on such indications. Data was exported to SPSS version 17. Using double entry, the data was cross checked for consistency and accuracy. Responses and

observations given points and tallied then recorded to obtain means then presented in graphs, charts and tables.

3.9. ETHICAL CONSIDERATIONS

Clearance was obtained from Kampala International University-Western Campus faculty of clinical medicine & dentistry through IREC. Approval was sought from the hospital administration at ARRH. Participants were assured of confidentiality and use of the information obtained only for the purpose of the research. Participation was fully out of the respondents' choice with the right to pull out at any time, whenever they no longer felt comfortable to continue. The researcher assures no conflict of interests in carrying out the study.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.0.INTRODUCTION

This chapter deals with the analysis of the findings and presents them as per objective and in the form of narratives, tables, graphs and charts. A total of 335 women of reproductive age took part in the study. 335 questionnaires were administered, returned and analyzed thereby giving a response rate of 100%.

4.1. DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

<i>VARIABLE</i>	<i>FREQUENCY (N)</i>	<i>PERCENTAGE (%)</i>
<i>1. AGE CLUSTERS (Yrs.)</i>		
<i>15 – 19</i>	40	11.94
<i>20 – 24</i>	55	16.42
<i>25 – 29</i>	89	26.57
<i>30 – 34</i>	62	18.51
<i>35 – 39</i>	67	20
<i>40 – 44</i>	14	4.18
<i>45 – 49</i>	8	2.39
	335	100
<i>2. RELIGION</i>		
<i>Protestant</i>	100	29.85
<i>Catholic</i>	180	53.73
<i>Muslim</i>	5	41.79
<i>SDA</i>	50	14.93
	335	100
<i>3. MARITAL STATUS</i>		
<i>Single</i>	103	30.75
<i>Married</i>	232	69.25
	335	100

4. LEVEL OF EDUCATION		
<i>Primary</i>	129	38.51
<i>Secondary</i>	62	18.51
<i>Tertiary</i>	42	12.54
<i>Still in School</i>	34	10.15
<i>None</i>	68	20.3
	335	100
5. OCCUPATION		
<i>Housewife</i>	69	20.60
<i>homemaker</i>	80	23.88
<i>Farming</i>	100	29.85
<i>Trade / Business</i>	22	6.57
<i>Handicraft</i>	64	19.11
<i>Formal employment</i>	335	100
6. RESIDENCE		
<i>Rural</i>	108	32.24
<i>Urban</i>	227	67.76
	335	100

Table 1: Socio-demographic characteristics of Respondents (N=335)

Majority of the respondents were between the ages of 20 and 39 years with the mean age being 29.02 years. Only 22 (6.57%) were above 39 years of age while about 40 (11.94%) were between 15 and 19 years.

Most of the women within the reproductive age at ARRHH were Catholics (53.73%). Protestants followed closely with 29.85% and next were those with other religious affiliations with 14.93%. Muslims were 1.49% of the respondents.

On the marital status, 232 (69.25%) of the respondents were married and 103 (30.75%) were single.

Most of the respondents had attained formal education. 38.51% had a primary level of education, 18.51% a secondary level, 12.54% a tertiary level of education while 10.15% were still in school. 68 (20.30%) of the women had never achieved any form of formal education. Majority of the women interviewed were not formally employed. Only 64 (19.11%) were in a sort of formal

employment. Most of them were either traders / business people (29.85%) while the rest were either farmers (23.88%), housewives (20.60%) or dealt in handicrafts (6.57%).

4.2. KNOWLEDGE & KNOWLEDGE SOURCE ON MODERN CONTRACEPTIVES

All the respondents were aware of the existence of modern contraceptive methods. 232 (69.25%) had adequate knowledge on the various types while 103 (30.75%), apart from being aware that modern contraceptive methods do exist, were not knowledgeable on the various options available to them. Most of those who lacked adequate knowledge on modern contraceptive methods were on their maiden visit to the FP clinic. The various sources of information cited by those adequately knowledgeable were radio, television, health workers, family and friends while for those on their maiden visit were referrals by family, friends or self-referrals.

4.3. MODERN CONTRACEPTIVE USE

CURRENT CONTRACEPTIVE USE	NUMBER (N)	PERCENTAGE (%)
On modern contraceptive	82	24.48
Not yet on any form of modern contraceptive	253	75.52
TOTALS	335	100

Table 2: Degree of Utilization of Modern Contraceptive Use (N=335)

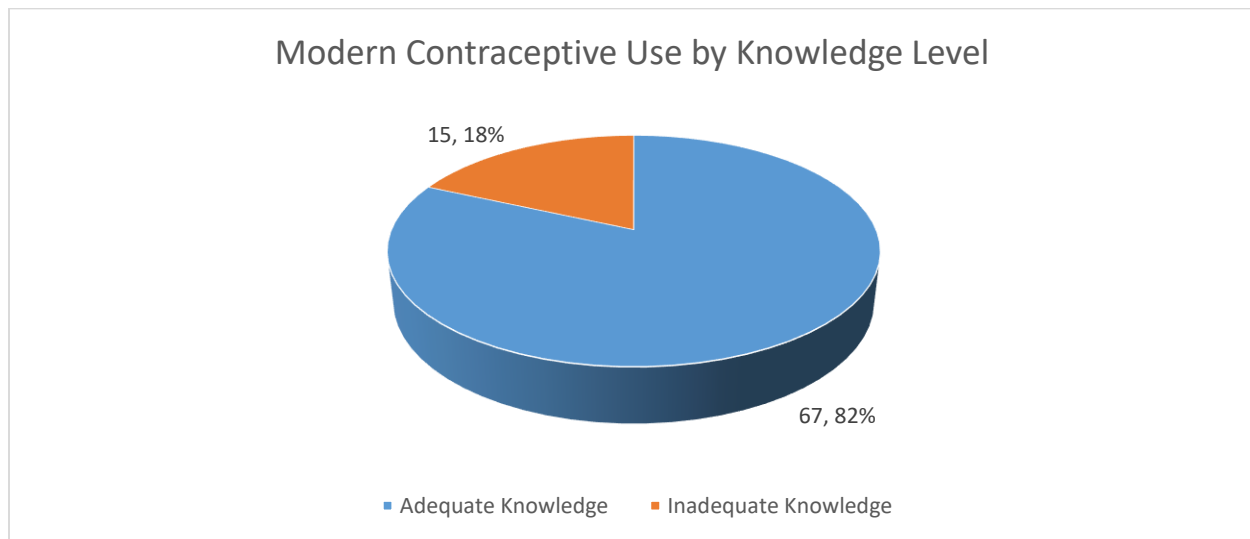
As shown in Table 2 above, out of the total 335 women interviewed, only 82 were using some form of modern contraceptive at the time of the study while 253 were not on any. This gave an utilization rate of 24.48%.

4.4. FACTORS AFFECTING MODERN CONTRACEPTIVE USE

4.4.1. INFLUENCE OF KNOWLEDGE ON MODERN CONTRACEPTIVE USE

As discussed above on the section about knowledge about modern contraceptives, the respondents were placed into 2 categories; those with adequate knowledge (as gauged by their knowledge of the options available to them) and those with inadequate knowledge (did not know the options available to them). 232 (69.25%) were categorized as having adequate knowledge while 103 (30.75%) fell within the inadequate knowledge category. Modern contraceptive use between these two categories were compared and as Figure 2 below shows, most (82%) of the total number who were using a type of modern contraceptive had adequate knowledge concerning modern contraceptives while only 15 (18%) had inadequate knowledge. This means that, despite adequate knowledge, 165 were not yet on any modern contraceptive while 88 of those in the inadequate knowledge category were not using any either.

Figure 2: Effect Level of Knowledge on Modern Contraceptive Use (N=82)



Having adequate knowledge was associated with increased utilization of modern contraceptives (OR: 2.38).

4.4.2. MODERN CONTRACEPTIVE USE BY AGE

Younger women were associated with increased modern contraceptive use. The 20 – 24 years' age group contributed the most with 30.49% followed by the 15 – 19 years' age group (23.17%). 25 – 29 years (20.73%), 30 – 34 years (11.42%), 35 – 39 years (6.10%), 40 – 44 years (4.88%) and lastly 45 – 49 years (1.22%) followed in that order. A strong correlation existed between age and use of modern contraceptives (p-value 0.0008, C.I. 95%).

4.4.3. MARITAL STATUS AND UTILIZATION OF MODERN CONTRACEPTIVE METHODS

A total of 82 women within the reproductive age were on some form of modern contraceptive. These consisted of 33 singles, and 49 married with a larger proportion of the single women (32.04%) being on some form of modern contraceptive compared to the married. Only 21.12% of the married women were on a form of modern contraceptives. Being single increased the woman's odds of being in some sort of modern contraceptive method as compared to being married (OR: 1.7606).

4.4.4. RESIDENCE AND UTILIZATION OF MODERN CONTRACEPTIVES

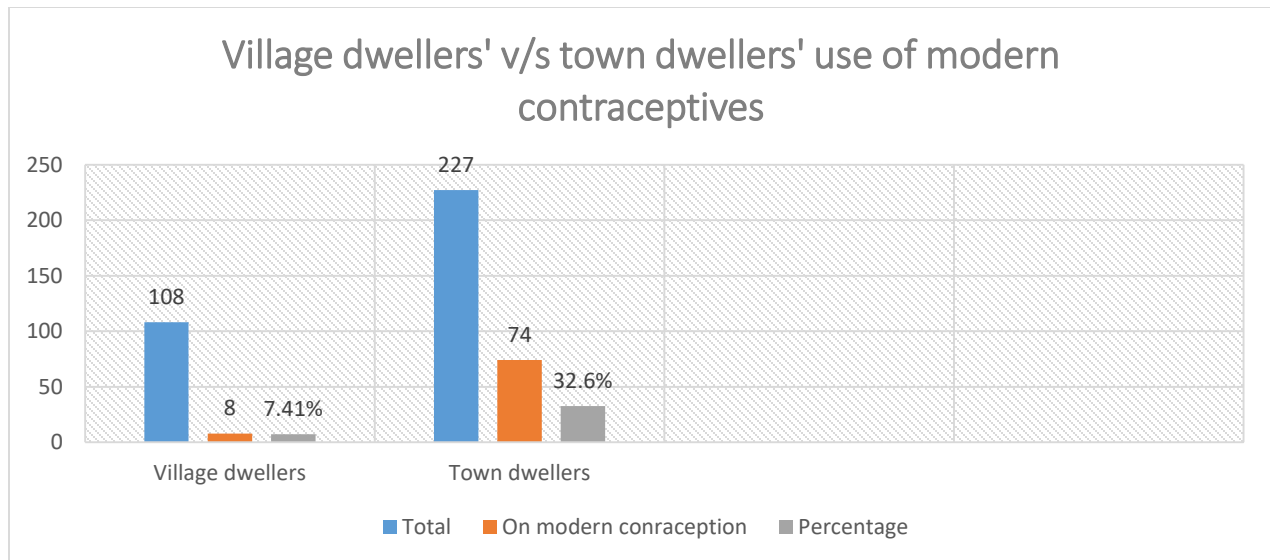


Figure 3: Modern contraceptive use by place of residence (N=335)

More of the town dwellers had embraced modern contraceptive use compared to the rural folk. 74 (32.6%) of the urbanite women were on a contraceptive method compared to only 8 (7.41%) of those from the village areas. A woman within the reproductive age and who hailed from a town setup was about 6 times more likely to be on a modern contraceptive method compared to their village counterpart (OR: 6.05).

4.4.5. LEVEL OF EDUCATION AND UTILIZATION OF MODERN CONTRACEPTIVES

EDUCATION LEVEL	ON CONTRACEPTIVES	NOT YET ON	TOTALS
PRIMARY	6 (4.65%)	123	129
SECONDARY	32 (51.61%)	30	62
TERTIARY	38 (90.48%)	4	42
STILL IN SCHOOL	4 (11.77%)	30	34
NONE	2 (2.94%)	66	68
TOTALS	82 (24.48%)	253	335

Table 3: Respondents' education level and modern contraceptive utilization (N=335)

From table 3 above, the influence of education level on modern contraceptive use may seem apparent. It is true that more of those who embraced modern contraceptive use had a tertiary level of education (90.48%) and that those with no education made the least contribution (2.94%).

However, in terms of regression analysis the education level showed no statistical significance in as far as modern contraceptive utilization was concerned p-value 0.58, C.I. 95%.

4.4.6. NUMBER OF CHILDREN ALIVE AND UTILIZATION OF MODERN CONTRACEPTIVES

Number of children alive	Using	Not yet on	Total
1 – 2	8	27	35
3 – 4	22	87	109
5 and above	32	102	134
None	20	37	57
Total	82	253	335

Table 4: Association of number of live children with utilization of modern contraceptives (N=335)

From table 4 above not having a child was associated with high rates of modern contraceptive use. 35.08% of those with no children were on some form of modern contraceptive use at the time. Those with 5 children or more came a close second with 23.88% of them being on a contraceptive. 22.86% of those with 1 or 2 children and 20.18% of those with 2 or 4 children were also using a modern contraceptive method. Not having a child showed increased odds of modern contraceptive use as opposed having any number of children alive. The odds among those with no live children were almost twice those among those with children (OR: 1.88).

4.4.7. OCCUPATION AND MODERN CONTRACEPTIVE USE

Modern contraceptive use was compared among the different occupations of the women interviewed. The findings were tabulated as shown below.

OCCUPATION	USE	NOT YET ON	% USING	TOTALS
Housewife	6	63	8.70	69
Peasant farming	6	74	7.50	80
Trade/business	25	75	25	100
Handicraft	3	19	13.64	22
Employed	42	22	65.63	64
TOTALS	82	253		335

Table 5: Modern Contraceptive Use by Occupation (N=335)

As Table 5 above shows, majority (65.63%) of the employed were on some sort of modern contraceptive at the time of interview while utilization was least among the peasant (7.50%). Business women followed a close second with 25% of them being on a modern contraceptive. Those in handicrafts (13.64%) housewives (8.70%) had a slightly higher utilization than the peasants. Univariate analysis elicited a statistical significance existence between employment status and modern contraceptive use. Those employed had their modern contraceptive use odds about 11-fold higher than those without formal employment (OR: 11.03).

4.4.8. RELIGION AND MODERN CONTRACEPTIVE USE

As shown earlier in Table 1, the respondents affiliated to 4 major categories religiously which were Protestant, Catholic, Muslim and Seventh Day Adventist (SDA). In total there were 100 Protestants, 180 Catholics, 50 SDAs and 5 Muslims.

The 82 respondents who were on some form of modern contraceptive were made up of 47 Protestants, 19 SDAs, 16 Catholics and not a single Muslim. This to say that 57.32% of those on contraceptives were Protestant, 23.17% were SDA, and 19.51% were Catholic. As already mentioned, no Muslim was on contraceptives at the time of interview.

Modern contraceptive use was highest among the Protestants (47%) followed by the SDAs (38%) and lastly the Catholics (8.89%). There was zero modern contraceptive use among the Muslims. Univariate analysis showed significant statistical correlation between religion and modern contraceptive use with being Protestant having higher odds of modern contraceptive use compared to the other religions (OR: 5.08).

4.5. FACTORS INFLUENCING CHOICE OF MODERN CONTRACEPTIVE USED

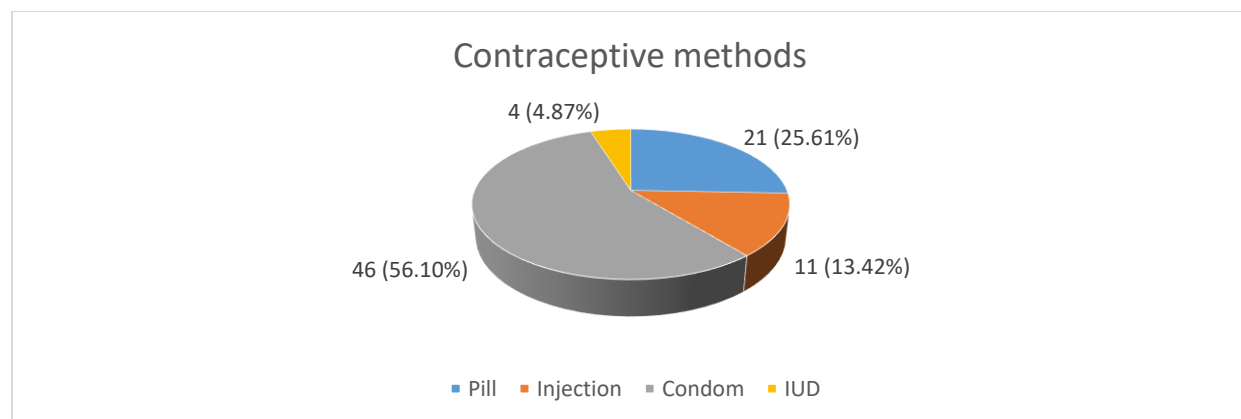


Figure 4: The different modern contraceptive methods used (N=82)

As shown in Figure 5 above, the most common modern method of contraception used was the condom (56.10%) followed by the pill (25.61%) and injection (13.42%). Intrauterine devices (IUDs) had the least users at (4.87%) as shown in figure 6 above.

Those that used the condom cited its ready availability, convenience to use whenever needed and no side effects as the reasons as to why they preferred it. The injection users said that they like the method given that it gives them some sense of control over their reproductive life and also the convenience of a single injection covering them for a long time. The IUD users chose the method based on its prolonged effectiveness as long as it has been inserted. Those on the pill cited that they chose the option due to its easy reversibility in that its effects quickly wane after stopping to take them. They also said that it was less invasive compared to the alternatives they might opted for.

Overall, the women on modern contraceptives were satisfied by their choice of method of contraceptive. The ones who used condoms, however, complained of reduced pleasure during the sexual act and it made consistent use with the same partner in a multi-session act a problem. The pill users had concerns over the pill burden and were worried that at times they forget to take their daily dose and this would affect effectiveness. They were also concerned about changes in body weight and their cycles on and off the pill as told to them by friends and loved ones who had experienced these side effects or who knew someone who did. The ones on injectable contraception were mainly concerned by their weight and delayed or problematic conception when they desired to have children, also as told by third parties.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0.INTRODUCTION

This chapter deals with the discussion of the study results as per the study objectives, conclusions derived from the findings and recommendations made to the various stakeholders.

5.1. DISCUSSIONS OF THE STUDY FINDINGS

5.1.1. SOCIO-DEMOGRAPHIC CHARACTERISTICS AND MODERN CONTRACEPTIVE USE

The women visiting Arua Regional Referral Hospital was made up of mainly ages ranging from 15 years to 49 years, with a median age of 19.59 years and mean age of 29.02 years. The women were mainly town dwellers (67.76%), with a primary level of education or lower (58.81%) that could explain the high degree of unemployment (80.90%) that have made them to venture into self-employment either in trade/business (29.85%) or handicraft making (6.57%). The town predominance could be explained by rural urban migration in pursuit of employment opportunities, a venture that has been rendered difficult by the low levels of education. This youthful population of women, being forced to move to urban centers with the hope of getting some form of employment (Mueller, Schmidt, Lozano, & Murray, 2019), but their efforts being impeded by the low level of education, could have made them get into marriages in an effort to ease the struggles. It is either this, or be forced into lifestyles that could endanger their persons and health such as sexual promiscuity and prostitution (Austin, Choi, & Berndt, 2017). Their being driven to marriage could also be an influence of their religious beliefs as evidenced by the fact that 98.51% were Christians and 1.49% were Muslims. Both religions teach against sexual promiscuity and sexual practices out of wedlock. The 30.75% of those who were still single may have been driven to consult family planning services in an effort to protect themselves from venereal diseases and more importantly, unplanned and probably unwanted pregnancies as seen in the 33.04% of them who were found to be on a modern contraceptive method at the time of the study. An unplanned pregnancy would be an added burden given their unmarried and unemployed status.

5.1.2. FACTORS ASSOCIATED WITH THE USE OF MODERN CONTRACEPTIVES

The factors found to have a statistically significant correlation with utilization of modern contraceptives include knowledge, age, marital status, residence, number of live children, employment status and religion. Level of education did not show any statistical significance.

Knowledge About Modern Contraceptives and Their Use

Concerning knowledge, adequate knowledge about modern contraceptive methods was found to increase utilization, findings that agree with (Kidayi et al., 2015) among many other studies.

Age and Modern Contraceptive Use

On age, modern contraceptive utilization was higher among those aged 20 – 24 years compared to all the other age groups. This could be attributed to higher levels of sexual activity in this particular age group, together with the influence of their knowledge on the availability of modern contraceptive methods at their disposal, plus their single status and lack of employment in the highly competent urban setup, drove them to accessing and utilizing these methods to protect themselves from the unwelcome burden of unplanned/unwanted pregnancies and venereal diseases. On the other hand, they could also be married and with a very supportive partner, who actively participated in their reproductive health matters. These findings mirror those of (Pandey & Singh, 2015) who also age of the woman and age at marriage to be an important factor affecting modern contraceptive use.

Marital Status and Modern Contraceptive Use

Being single was associated with increased modern contraceptives utilization. As mentioned earlier, this could be a factor of the hardships of being single, young and unemployed in a competitive urban environment where everyone is on the run in an effort to make ends meet. The need to protect themselves from the heavy burden of unplanned pregnancies together with the ever-looming scare of venereal diseases and HIV/AIDS, could have played a major role in influencing their decision to take up modern contraceptives. These findings replicate those by (Nyarko, 2015) who also reported more modern contraceptive use among singles compared to married women.

Place of Residence and Modern Contraceptive Use

Urban residence was associated with increased utilization of modern contraceptives compared to living in rural areas. In addition to the reasons stated earlier, ease of access to information could be a key contributor to this. Availability of electricity leading to easy access to information – both print, audio-visual and the internet-, avenues mostly used for sensitization and awareness creation, place the urbanites at a more advantageous position compared to their rural counterparts. This, together with increased access to a wide choice of facilities and amenities that offer family planning services within urban settings, further raise the advantage the urban woman has over the

rural woman. Reports by (Pandey & Singh, 2015) and (Bogale et al., 2011) also showed that women in towns or urban setups were more likely to use modern contraceptives compared to those in villages.

Number of Live Children and Modern Contraceptive Use

Having no children was found to increase utilization of modern contraceptives. This again goes back to the need to postpone or delay childbearing until one is more stable, in the very competitive urban environment, where employment is scarce and given the single status, having unplanned pregnancies would mean dire repercussions to the woman in terms of destabilizing them. These findings dispute those by (Tekelab, Melka, & Wirtu, 2015) in Ethiopia that reported with more live children, women were more likely to go for modern contraceptives, reports that were replicated by (Kabagenyi, Ndugga, Wandera, & Kwagala, 2014) in Makerere, Uganda.

Employment Status and Modern Contraceptive Use

Being in employment increased modern contraceptive use markedly. Given the high unemployment rates, one would choose to delay childbearing so as not to jeopardize their employment in an already competitive urban environment where employment was scarce and if they happened to lose their job, hopes of securing another was so minimal. Employment, as a gateway towards financial stability, and the need to further one's career, would drive them to seek family planning services so as to delay childbearing until when they felt more stable. (Nyarko, 2015) and (Kabagenyi, Ndugga, et al., 2014) also reported similar findings in their studies.

Religion and Modern Contraceptive Use

Religion showed a significant correlation with modern contraceptive use. Utilization was high among the Protestants (47%) and Seventh-Day Adventists (38%) compared to the Catholics (8.89%) and Muslims (0%). Religious beliefs could have been a deterrence towards modern contraceptive use as could be said about Catholics whose teaching whose teachings prohibit use of artificial methods of birth control. The Muslims are very strict concerning sexual encounters out of wedlock and married couples are also discouraged from any artificial methods of preventing conception. This could try explain the low utilization in these two groups. (Ochako et al., 2015), and (Eliason et al., 2014) reported religious affiliations as an important factor determining modern contraceptive use.

Education Level and Modern Contraceptive Use

Though utilization was high among those with a tertiary education (90.48%), no statistical significance could be proved in the correlation between education level and modern contraceptive use. It is true that with a higher education level, the level of awareness on matters health and the health-seeking behaviors are expected to markedly improve compared to a lower level of education.

The significance of marital status was also reported in Southwest Nigeria by (Afolabi et al., 2015) who reported high utilization rates among single (67%) compared to the married (43%) women, a report that (Guttmacher Institute) had reported in Uganda back in 2013. Singles (44%) had higher utilization rates compared to married women (26%) according to the Guttmacher study although utilization among the married women had shown an upward trend from 2011 while in the single women it had stagnated.

Significance of residence was also reported in several other studies. In Ethiopia for instance, Bogale, in his study in 2011, reported higher utilization among urban women (87.5%) compared to the rural women (72.8%), findings that Pandey and Singh came to refute in their own study conducted in India in 2015, where they reported place of residence to have no significance but who were again proved wrong by Melka et. Al, in their own study conducted in Ethiopia in the same year of 2015, where again, rural wome were found to have low utilization.

In nearby Kenya, Ochako et. al, reported findings similar to this study's in their study that they conducted in 2015. Region of residence, marital status and access to sources of information (hence improved knowledge) were again found significant, findings that Asiimwe and colleagues in Uganda concurred with and Andi et. al, in Makerere university seconded in 2014.

5.1.3. FACTORS INFLUENCING CHOICE OF MODERN CONTRACEPTIVE

The key factors that stood out as to influence the choice of one modern contraceptive method over another were accessibility and availability, ease of use and termination, with minimal delay in resumption of fertility together with fear of perceived side effects.

For instance, those that used the condom cited its ready availability, convenience to use whenever needed and no side effects as the reasons as to why they preferred it. The injection users said that they like the method given that it gives them some sense of control over their reproductive life and also the convenience of a single injection covering them for a long time. The IUD users chose the method based on its prolonged effectiveness as long as it has been inserted. Those on the pill cited

that they chose the option due to its easy reversibility in that its effects quickly wane after stopping to take them. They also said that it was less invasive compared to the alternatives they might opted for.

The ones who used condoms, however, complained of reduced pleasure during the sexual act and it made consistent use with the same partner in a multi-session act a problem. This agrees with (Campbell et al., 2016) report findings and which were replicated by (Macharia, Kombe, Mwaniki, & Habtu, 2017) in their study conducted in Thika Level 5 Hospital in Nairobi, Kenya, who found that reduced pleasure during sexual intercourse while using a condom was the main hindrance to its use. The pill users had concerns over the pill burden and were worried that at times they forget to take their daily dose and this would affect effectiveness, a barrier also reported by (Ochako et al., 2015) in their study in Kenya. They were also concerned about changes in body weight and their cycles on and off the pill as told to them by friends and loved ones who had experienced these side effects or who knew someone who did. These concerns over weight gain associated with the oral contraceptive pill were also reported in a study conducted in Kano, Nigeria by (Ibrahim, Rabi, & Abubakar, 2015). The ones on injectable contraception were mainly concerned by their weight and delayed or problematic conception when they desired to have children, also as told by third parties. The concerns over the side effects of the injectable modern contraceptives, particularly the belief that they made return to normal fertility and ability to conceive immediately after stoppage difficult was also reported as a major barrier in a study conducted by (Balbás, Balbás, & Rivera,) in 2018.

5.2. CONCLUSIONS

Utilization of modern contraceptive methods among women of reproductive age at Arua Regional Referral Hospital was significantly correlated with knowledge, marital status, residence, number of live children, employment status and religion. Education level was found to bear no statistically significant correlation with utilization of modern contraceptives. Among the modern contraceptive methods used included Condoms (56.10%), the pill (25.61%), injectable (13.42%), and IUDs (4.87%). Ready availability, convenience of use and lack of side effects influenced condom users, a sense of client control over their reproductive life and convenience of a single injection conferring contraception for a long-time influenced choice of the injectable while prolonged effectiveness influenced choice of IUDs. Easy reversibility and less invasiveness compared to alternative methods influenced choice of the pill as a contraceptive method.

5.3. RECOMMENDATIONS

5.3.1. To the Partners of Women of Reproductive Age in Arua

Take an active role in family and reproductive health by supporting modern contraceptive use among their female partners for they too have much to benefit by doing so.

5.3.2. To the Clergy and Religious Leaders of Arua

Embrace and teach modern contraceptive use among their congregants who are prohibited by their religious affiliations from taking up the methods. Also play an active role in providing correct information on the modern contraceptive methods and their pros and cons so as to eliminate fears that are only based on perception influenced by possession of inadequate and correct information. The merits of modern contraceptive use outweigh the demerits.

5.3.3. To the Health Care Providers at Arua Regional Referral Hospital

Create more awareness on the existence and benefits of modern contraceptives through outreaches and sensitization campaigns with the key aim of offering correct information on each contraceptive method in terms of benefits and risks so as to reduce on cases of nonuse based on perceptions and beliefs that result from misinformation.

5.3.4. To the Government Through the Ministry of Health

Allocate more funds to scale-up awareness creation and sensitization through all avenues possible such as electronic, print and social media, seminars and campaigns. Empower health workers with more knowledge concerning current trends in modern contraceptives and put up opportunities through which they can pass this information to the community. Hasten and increase the coverage of the rural electrification program so that the rural communities can benefit from the same as their urban counterparts in terms of ease of access to information.

REFERENCES

- Afolabi, B. M., Ezedinachi, E., Arikpo, I., Ogunwale, A., Ganiyu, D. F., Abu, R., & Ajibade, A. (2015). Knowledge, non-use, use and source of information on contraceptive methods among women in various stages of reproductive age in rural Lagos, Southwest Nigeria. *Open Access Journal of Contraception, Volume 6*, 65. <https://doi.org/10.2147/OAJC.S80683>
- Ajayi, A. I., Adeniyi, O. V., & Akpan, W. (2018). Use of traditional and modern contraceptives among childbearing women: findings from a mixed methods study in two southwestern Nigerian states. *BMC Public Health, 18*(1), 604. <https://doi.org/10.1186/s12889-018-5522-6>
- Andi, J. R., Wamala, R., Ocaya, B., & Kabagenyi, A. (2014a). Modern contraceptive use among women in Uganda: An analysis of trend and patterns (1995-2011). *Etude de La Population Africaine, 28*(2), 1009–1021. <https://doi.org/10.11564/28-0-553>
- Andi, J. R., Wamala, R., Ocaya, B., & Kabagenyi, A. (2014b). Modern contraceptive use among women in Uganda. *Etude de La Population Africaine, 28*(2), 1009–1021. <https://doi.org/10.11564/28-0-553>
- Asiimwe, J. B., Ndugga, P., Mushomi, J., & Manyenye Ntozi, J. P. (2014). Factors associated with modern contraceptive use among young and older women in Uganda; a comparative analysis. *BMC Public Health, 14*(1), 926. <https://doi.org/10.1186/1471-2458-14-926>
- Austin, K. F., Choi, M. M., & Berndt, V. (2017). Trading sex for security: Unemployment and the unequal HIV burden among young women in developing nations. *International Sociology, 32*(3), 343–368. <https://doi.org/10.1177/0268580917693172>
- Balbás, B. P. B., Balbás, L. A. B., & Rivera, A. P. (2018). Contraceptive Methods and the Subsequent Search for a Pregnancy. In *Family Planning*. <https://doi.org/10.5772/intechopen.72525>
- Bogale, B., Wondafrash, M., Tilahun, T., & Girma, E. (2011). Married women's decision making power on modern contraceptive use in urban and rural southern Ethiopia. *BMC Public Health, 11*(1), 342. <https://doi.org/10.1186/1471-2458-11-342>
- Brown, W., Druce, N., Bunting, J., Radloff, S., Koroma, D., Gupta, S., ... Darmstadt, G. L. (2014). Developing the “120 by 20” goal for the global FP2020 initiative. *Studies in Family Planning, 45*(1), 73–84. <https://doi.org/10.1111/j.1728-4465.2014.00377.x>
- Campbell, A. N. C., Brooks, A. J., Pavlicova, M., Hu, M.-C., Hatch-Maillette, M. A., Calsyn, D. A., & Tross, S. (2016). Barriers to condom use: Results for men and women enrolled in HIV

- risk reduction trials in outpatient drug treatment. *Journal of HIV/AIDS & Social Services*, 15(2), 130–146. <https://doi.org/10.1080/15381501.2016.1166090>
- Eliason, S., Awoonor-Williams, J. K., Eliason, C., Novignon, J., Nonvignon, J., & Aikins, M. (2014). Determinants of modern family planning use among women of reproductive age in the Nkwanta district of Ghana: A case-control study. *Reproductive Health*. <https://doi.org/10.1186/1742-4755-11-65>
- Gakidou, E., & Vayena, E. (2013). Use of modern contraception by the poor is falling behind. *PLoS Medicine*. <https://doi.org/10.1371/journal.pmed.0040031>
- Gueye, A., Speizer, I. S., Corroon, M., & Okigbo, C. C. (2015). Belief in family planning myths at the individual and community levels and modern contraceptive use in Urban Africa. *International Perspectives on Sexual and Reproductive Health*, 41(4), 191–199. <https://doi.org/10.1363/4119115>
- Guttmacher Institute. (2013). Contraception and Unintended Pregnancy in Uganda. *Fact Sheet*, (February). Retrieved from <http://www.guttmacher.org/pubs/FB-Contraception-and-unintended-pregnancy-in-Uganda.html>
- Ibrahim, G., Rabi, A., & Abubakar, I. (2015). Knowledge, attitude and practice of contraceptives among grand multiparous women attending antenatal clinic in a specialist hospital, Kano, Nigeria. *Nigerian Journal of Basic and Clinical Sciences*, 12(2), 90. <https://doi.org/10.4103/0331-8540.169277>
- Igbodekwe, F. C., Oladimeji, O., Oladimeji, K. E., Adeoye, I. A., Akpa, O. M., & Lawson, L. (2014). Utilisation of Modern Contraceptive among Women of Childbearing Age in Resource Constraint Setting: Evidence from 2008 National Demographic and Health Survey in Nigeria. *Journal of Health Science*, 4(3), 72–78. <https://doi.org/10.5923/j.health.20140403.04>
- Kabagenyi, A., Jennings, L., Reid, A., Nalwadda, G., Ntozi, J., & Atuyambe, L. (2014). Barriers to male involvement in contraceptive uptake and reproductive health services: A qualitative study of men and women's perceptions in two rural districts in Uganda. *Reproductive Health*. <https://doi.org/10.1186/1742-4755-11-21>
- Kabagenyi, A., Ndugga, P., Wandera, S. O., & Kwagala, B. (2014). Modern contraceptive use among sexually active men in Uganda: Does discussion with a health worker matter? *BMC Public Health*, 14(1). <https://doi.org/10.1186/1471-2458-14-286>
- Kidayi, P. L., Msuya, S., Todd, J., Mtuya, C. C., Mtuy, T., & Mahande, M. J. (2015). Determinants

- of Modern Contraceptive Use among Women of Reproductive Age in Tanzania: Evidence from Tanzania Demographic and Health Survey Data. *Advances in Sexual Medicine*, 05(03), 43–52. <https://doi.org/10.4236/asm.2015.53006>
- Lakew, Y., Reda, A. A., Tamene, H., Benedict, S., & Deribe, K. (2013). Geographical variation and factors influencing modern contraceptive use among married women in Ethiopia: evidence from a national population based survey. *Reproductive Health*, 10(1), 52. <https://doi.org/10.1186/1742-4755-10-52>
- Macharia, A. G., Kombe, Y., Mwaniki, P., & Habtu, M. (2017). *Barriers of Condom Use among HIV Positive Women at Thika Level 5 Hospital, Kenya*. <https://doi.org/10.4172/2155-6113.1000722>
- Melka, A. S., Tekelab, T., & Wirtu, D. (2015). Determinants of long acting and permanent contraceptive methods utilization among married women of reproductive age groups in western Ethiopia: A cross-sectional study. *Pan African Medical Journal*, 21, 1–10. <https://doi.org/10.11604/pamj.2015.21.246.5835>
- Mueller, V., Schmidt, E., Lozano, N., & Murray, S. (2019). Implications of Migration on Employment and Occupational Transitions in Tanzania. *International Regional Science Review*. <https://doi.org/10.1177/0160017617751029>
- Nsubuga, H., Sekandi, J. N., Sempeera, H., & Makumbi, F. E. (2016). Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: A cross-sectional survey. *BMC Women's Health*, 16(1), 1–11. <https://doi.org/10.1186/s12905-016-0286-6>
- Nyarko, S. H. (2015). Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Women's Health*, 15(1), 60. <https://doi.org/10.1186/s12905-015-0221-2>
- Ochako, R., Mbondo, M., Aloo, S., Kaimenyi, S., Thompson, R., Temmerman, M., & Kays, M. (2015). Barriers to modern contraceptive methods uptake among young women in Kenya: A qualitative study Global Health. *BMC Public Health*. <https://doi.org/10.1186/s12889-015-1483-1>
- Ochako, R., Temmerman, M., Mbondo, M., & Askew, I. (2017). Determinants of modern contraceptive use among sexually active men in Kenya. *Reproductive Health*, 14(1), 56. <https://doi.org/10.1186/s12978-017-0316-3>
- Pandey, A., & Singh, K. K. (2015). Contraceptive use before first pregnancy by women in India

- (2005–2006): determinants and differentials. *BMC Public Health*, 15(1), 1316. <https://doi.org/10.1186/s12889-015-2652-y>
- Qazi, H. A., Hashmi, A., Raza, S. A., Soomro, J. A., & Ghauri, A. (2010). Contraceptive methods and factors associated with modern contraceptive in use. *Journal of Family and Reproductive Health*, 4(1), 41–46. Retrieved from <http://jfrh.tums.ac.ir/index.php/jfrh/article/view/88/88>
- Robinson, N., Moshabela, M., Owusu-Ansah, L., Kapungu, C., & Geller, S. (2016). Barriers to Intrauterine Device Uptake in a Rural Setting in Ghana. *Health Care for Women International*, 37(2), 197–215. <https://doi.org/10.1080/07399332.2014.946511>
- Rutaremwa, G., Kabagenyi, A., Wandera, S. O., Jhamba, T., Akiror, E., & Nviiri, H. L. (2015). Predictors of modern contraceptive use during the postpartum period among women in Uganda: a population-based cross sectional study. *BMC Public Health*, 15(1), 262. <https://doi.org/10.1186/s12889-015-1611-y>
- Tekelab, T., Melka, A. S., & Wirtu, D. (2015). Predictors of modern contraceptive methods use among married women of reproductive age groups in Western Ethiopia: A community based cross-sectional study. *BMC Women's Health*. <https://doi.org/10.1186/s12905-015-0208-z>
- Tibaijuka, L., Odongo, R., Welikhe, E., Mukisa, W., Kugonza, L., Busingye, I., ... Bajunirwe, F. (2017). Factors influencing use of long-acting versus short-acting contraceptive methods among reproductive-age women in a resource-limited setting. *BMC Women's Health*. <https://doi.org/10.1186/s12905-017-0382-2>
- Tobe, A., Nahusenay, H., & Misker, D. (2015). Factors Associated with Modern Contraceptive Service Utilization among Married Reproductive Age Women in Melo Koza Woreda , Southern. *Journal of Pregnancy and Child Health*, 2(1), 1–8. <https://doi.org/10.4172/2376-127X.1000128>
- Uganda Bureau of Statistics. (2016). *Uganda Demographic and Health Survey 2016*. 1–60.
- Uganda Bureau of Statistics Kampala, U. (2017). *Uganda Demographic and Health Survey Key Indicators Report*.
- Worku, A. G., Tessema, G. A., & Zeleke, A. A. (2014). Trends and determinants of contraceptive use among young married women (age 15-24) based on the 2000, 2005, and 2011 Ethiopian Demographic and Health Surveys: A multivariate decomposition analysis . *DHS Working Papers No. 103* , (August). Retrieved from <http://dhsprogram.com/pubs/pdf/WP103/WP103.pdf>

Worku, A. G., Tessema, G. A., & Zeleke, A. A. (2015). Trends of modern contraceptive use among young married women based on the 2000, 2005, and 2011 Ethiopian demographic and health surveys: A multivariate decomposition analysis. *PLoS ONE*, *10*(1). <https://doi.org/10.1371/journal.pone.0116525>

APPENDICES

APPENDIX I: CONSENT FORM

CONSENT FORM

STUDY TITLE: FACTORS INFLUENCING UTILIZATION AND CHOICE OF MODERN CONTRACEPTIVES AMONG WOMEN ATTENDING FAMILY PLANNING AT ARUA REGIONAL REFERRAL HOSPITAL.

I have read and understood the research topic above on the planned study and the explanations given to me. I understand what I have been requested to do in respect to this study. I have asked questions and gotten clarifications about the study and I am satisfied. I have, after due consideration, willingly consented to take part in this study as explained.

Participant's signature Date

Investigators name Signature

Date

Investigator's Contacts:

APPENDIX II: DATA COLLECTION TOOL

STUDY QUESTIONNAIRE

SERIAL NO:

INTRODUCTION

STUDY TITLE: FACTORS INFLUENCING UTILIZATION AND CHOICE OF MODERN CONTRACEPTIVES AMONG WOMEN ATTENDING FAMILY PLANNING AT ARUA REGIONAL REFERRAL HOSPITAL.

CONFIDENTIALITY: I am **Eyotaru Peace Oliver** a final year medical student at Kampala International University – Western Campus carrying out the above research. I would hereby wish to assure you that the information you will provide will be accorded the confidentiality it deserves and will not be used for purposes other than those meant for this research. Therefore, feel free.

DEMOGRAPHIC DATA

A. Socio-demographic characteristics

1. How old are you?

- a) 15 – 19 years ☐
- b) 20 -24 years ☐
- c) 25 – 29 years ☐
- d) 30 – 34 years ☐
- e) 35 – 39 years ☐
- f) >39 years ☐

2. What is your marital status?

- a) Single ☐
- b) Married ☐
- c) Widowed ☐
- d) Separated /Divorced ☐
- e) Cohabiting/come-we-stay ☐

3. If married, is it a monogamous or polygamous marriage?

4. Which religion are you?

5. What is the highest level of formal education you have attained?

- a) None ☐
- b) Primary ☐

- c) Secondary ☐
- d) Tertiary ☐
- e) Still in school ☐

6. What is your occupation?

- a) None ☐
- b) Farming ☐
- c) Trade ☐
- d) Handicraft ☐
- e) Formal employment ☐
- f) Other (specify)

7. Where do you live? (*Ask village and parish name*)

8. How far is it from the nearest health facility?

9. Is it in a rural or urban area?

- a) Village ☐
- b) Town ☐

10. How many children do you have?

- None ☐
- One ☐
- Two ☐
- Three ☐
- Four ☐
- Five ☐
- More than five ☐

11. How many times have you been pregnant, if ever?

- a) 1 – 4 times ☐
- b) 5 and above ☐

12. Have you ever had an abortion or miscarriage before?

13. When did you last give birth?

- a) Never given birth before ☐
- b) 1 – 11 months ago ☐
- c) 12 – 24 months ago ☐
- d) 25 – 36 months ago ☐

e) More than 36 months ago ☐

B. Other important information on contraceptive use

1. Do you know anything about family planning and contraceptives?

YES ☐ NO ☐

2. Apart from health workers what are your other sources of information concerning family planning?

Friends ☐

Relatives ☐

Media ☐

3. Do you use any contraceptive / family planning method?

YES ☐ NO ☐

4. Why did you choose to use family planning?

Delay pregnancy ☐

Stop completely ☐

Financial reasons ☐

Because my friends are using ☐

History of difficult deliveries ☐

Others

If yes to (3) above,

a) Which one?

b) What made you choose that particular method?

c) Are you satisfied with that method?

d) What are your concerns about the method?

5. Who influenced you to start using family planning?

Friends ☐

Husband ☐

Relatives ☐

Media / radio / TV ☐

Health worker ☐

Why not?

IUD ☐

Male condom ☐

Female condom ☐

Implants ☐

Pills ☐

Injectables ☐

Why did you choose this method?

.....

.....

.....

.....

6. Who told you about the current method?

Friends ☐

Relatives ☐

Husband ☐

Other

7. Which other method have you previously used?

None ☐

IUD ☐

Male condom ☐

Female condom ☐

Implants ☐

Pills ☐

Injectables ☐

Others

8. What made you change to the current method?

Side effects ☐

Others

9. Are you planning to change to another method?

YES ☐

NO ☐

If yes, what are your reasons for wanting to change to another method?

.....
.....

10. Does your partner take part in your decisions concerning contraceptive use and family planning?

11. For how long (in years) are you planning to use family planning?
.....

12. Which other methods do you know apart from the one you are using?

IUD ☐

Male condom ☐

Female condom ☐

Implants ☐

Pills ☐

Injectables ☐

13. Would you recommend anyone to start using family planning?

YES ☐

NO ☐

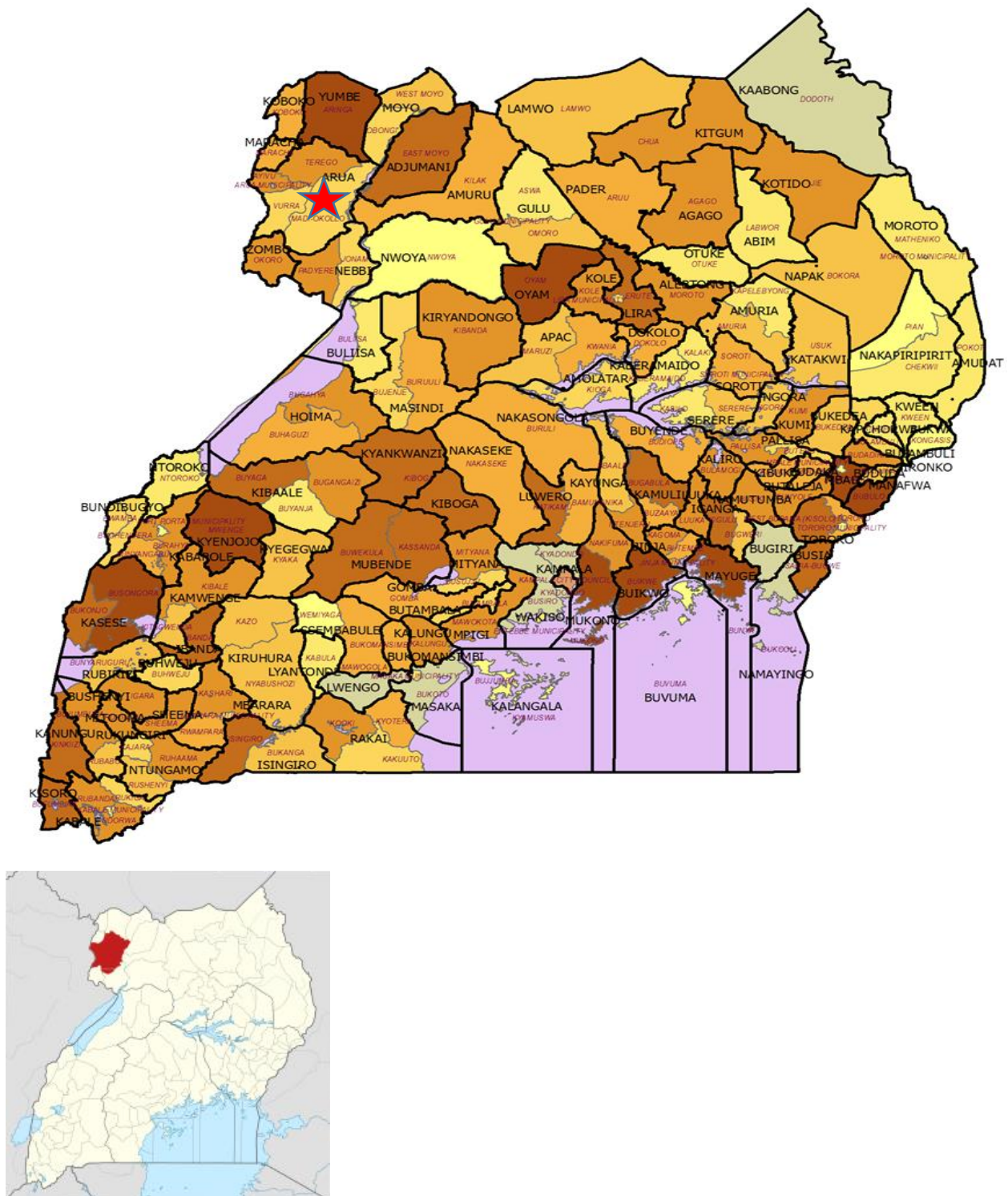
Is there anything else you want to add, ask, and clarify?

.....
.....
.....
.....
.....
.....

Otherwise,

THANK YOU

**APPENDIX III: MAP OF UGANDA SHOWING LOCATION OF ARUA DISTRICT
(STAR AND RED AREA IN INSET)**



APPENDIX IV: APPROVAL LETTER FROM KIU-IREC



P.O. BOX 71, ISHAKA UGANDA
Tel: +256 200923574
www.kiu.ac.ug

OFFICE OF THE DEAN
FACULTY OF CLINICAL MEDICINE & DENTISTRY

13/03/2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: EYOTARU PEACE OLIVER (BMS/0061/133/DU)

The above named person is a fifth year student at Kampala International University pursuing a Bachelor of Medicine, Bachelor of Surgery (MBChB) Programme.

She wishes to conduct her student research in your hospital.

Topic: Factors influencing the utilization and choice of modern contraceptives among women attending family planning clinic at Arua Regional Referral Hospital

Supervisor: Dr. Ddamulira Adam

Any assistance given will be appreciated.

Yours Sincerely,

So Nt

Dr. Akib Surat
Deputy Executive Director/Assoc. Dean FCM&D



*Reminded for data collection
Please above it
Ethical principles
Added out
AD
25/5/2019*

"Exploring the Heights"

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