Experiences of women who conceived while using long acting reversible contraception in Kabale district

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Experiences of women who conceived while using long acting reversible contraception in Kabale district

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ABSTRACT

Background

Long acting reversible contraceptives are promoted by family planning programs globally as highly effective and convenient family planning methods. The long active reversible contraceptives are however not 100% effective, which may result in unplanned pregnancies that they were primarily intended to avert. The experiences of those women who conceive while using LARCs is largely not documented.

Purpose

To describe the experiences of women who conceived while using LARCs in Kabale district.

Methods:

Using a qualitative descriptive design, thirteen women from Kabale district who had conceived while using LARCs were interviewed about their experiences. The interviews were transcribed and analysed thematically

Findings:

Women who experienced LARC failure were not aware of the possibility of the methods failing at the time they took up the methods. Health workers go ahead to provide hormonal contraceptives to HIV positive women without informing them about the possible drug interactions with some also did not receive counselling to address their fears following the LARC failure.

Conclusions:

Unplanned pregnancies cause psychological, social and economic burden on individuals who have taken precaution to avoid getting pregnant. Comprehensive counselling about method effectiveness prior to taking up the method enables clients make fully informed choices about contraceptive methods hence opting for more appropriate methods and helping them to cope with method failure in case they go ahead to choose the LARCs.

DEDICATION

This research is dedicated to my dear husband: Cedric Muhebwa, who supported and encouraged me to remain focused and persistent in order to accomplish a Master's degree in Public health. I also dedicate the research to my two lovely daughters: Shiloh Nimurungi and Shantal Nkwanzi who inspire me to work hard and better myself.

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ACRONYMS

ACOG	American College of Obstetricians and Gynaecologists
AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante Natal Care
ART	Anti- Retroviral Therapy
ARV	Anti-Retroviral
ARVs	Anti-Retroviral Drugs
FDA	Food and Drug Association
FP	Family planning
HIV	Human Immunodeficiency Virus
IUD	Intra- Uterine Device
LARC	Long Acting Reversible Contraceptive
MEC	Medical Eligibility Criteria
USA	United States of America.
VHT	Village Health Team
WHO	World Health Organization
UN	United Nations

CHAPTER ONE: BACKGROUND

1.1 Introduction

Globally, maternal mortality is high and reducing maternal mortality remains high on the global agenda as highlighted in the Sustainable Development Goals (UN, 2015b). Three hundred and fifty-eight thousand women die of pregnancy-related causes every year with many deaths resulting from unintended pregnancies. Many unintended pregnancies result in abortions most of which are unsafe, and unplanned births contributing to the high maternal and infant mortality (Casterline et al. 2011). Family planning has social economic benefits to the woman, couple, children, community and country by preventing unplanned pregnancies. Family planning is adopted voluntarily through the practice of contraception or other methods of birth control on the basis of knowledge, attitude and responsible decision by individuals and couples, in order to promote the health welfare of the family and contribute to the social and economic development of the country (Mosha et al, 2013).

Contraception is considered a vital public health intervention and one of the many ways to improve maternal and child health (United Nations, 2015). Using contraception is known to contribute to reduction of maternal mortality by reducing the number of times a woman is exposed to the risk of mortality due to births and by preventing high-risk births (Stover & Ross, 2010; Starbird et al, 2016). Effective contraception has far reaching benefits by averting unwanted pregnancies, unsafe abortions and maternal and new born deaths toward helping women, families, and countries achieve their health goals. It prevents about 230 million births every year (Ahmed et al, 2012; Ali et al, 2012).

Although, most unwanted pregnancies result from unmet need for family planning, a noteworthy portion of unwanted pregnancies result from contraceptive failure (Tsui et al. 2010). Long acting reversible contraceptive failure therefore is of public health concern as it contributes to maternal and infant morbidity and mortality for which they were intended to avert. The contribution of LARC failure to unwanted pregnancies and births has also been recognised locally and globally (Sundaram et al, 2017).

1.2 Background to the study

Unintended pregnancy remains a global public health problem despite the availability of effective contraceptives. In 2012, 40% of all pregnancies were unintended worldwide (Sedgh et al, 2014). Uganda has a burden of more than four in every 10 births unplanned with over 1.2 million unintended pregnancies (Hussain, 2013). Although, most of these unwanted pregnancies result from the unmet need for family planning, a significant portion of the unwanted pregnancies result from contraceptive failure. If all contraceptive failures were eliminated, unintended births would be reduced by nearly a third on average across countries (Bradley et al, 2011).

Factors that affect LARC failure rates and probabilities include; inherent efficacy of the method when used correctly and consistently (perfect use), technical attributes of the method that facilitate or interfere with proper use and characteristics of the user. LARC methods are highly effective with failure rates of less than 1%. LARC methods are non-user dependent and do not rely on continuing user motivation for their effectiveness (Sensalire 2015). Women who have experienced contraceptive failure have clearly demonstrated their desire to avoid pregnancy

and taken steps to prevent it. Despite the failure rates of the long term contraceptive methods and contraception being low, the consequences of unintended pregnancies among the LARC users can have far reaching consequences.

Unintended pregnancy results in various consequences. These include unsafe abortions, has negative effects on women's health and the health of new-borns, and imposes a considerable personal burden as well as a financial burden on families and society (Winner et al, 2012).

According to Kamal (2013), women who have unplanned pregnancies were more likely to experience domestic violence, which had consequences ranging from physical injury to psychological morbidity. These consequences depict how these women cope with the unwanted pregnancies. In some instances, some women come to terms with the pregnancy, other live in denial, and end up with unplanned births and abortions.

Despite LARC failure and the resulting consequences of unwanted pregnancies to the women, LARCs are considered highly effective methods. Effective contraception averts unwanted pregnancies, unsafe abortions and maternal and new born deaths, contributing to reduction in maternal and infant mortality. It reduces the number of times a woman is exposed to the risk of mortality due to births and by preventing high-risk births hence lowering maternal mortality (Stover and Ross 2010; Starbird et al. 2016). Although the LARCs may sometimes fail, the benefits are thought to outweigh the consequences, therefore the need to establish the implications of the LARC failure to the individuals, their families and communities.

Utilization of LARCs remains low among women. In Uganda, the use of LARC has not been stable with variances in the urban and the rural women. The Uganda Demography and Heath

Survey (UDHS) report indicated that utilization of LARCs has increased in the country and it is currently 7.8% among the women (UBOS, 2016). With time, the utilization has been observed to increase following the advocacy of the many players in the market such as NGOs, government and other institutions as effective methods of contraception (United States Agency International Project Policy 2015). As the use of LARC increases, the failure among some users is also expected to increase (Winner et al, 2012) and therefore the need to establish the challenges such women through and how they can be helped. This will give further insight on how best to promote and overcome barriers to uptake of LARCs.

In Uganda, individuals and couples, who want to control their fertility, often have to overcome numerous barriers to access family planning services. Some of these barriers include high cost, long distances, poor distribution, medical restrictions and fear of side-effects, or even misinformation (Mosha et al, 2013). Health worker have limited skill sets to comprehensively provide all the long term methods at the various health facility levels also limits access to use of LARCs (Kakaire et al. 2014). Fear of side effects especially due to hormonal implants including irregular or heavy bleeding, loss of libido, weight gain, amenorrhea, unwanted vaginal wetness and dryness and pain significantly affects their uptake, especially for women using contraceptives secretly (Nalwadda et al. 2010). Women who experience LARC failure like many other users, often go to great lengths to overcome these barriers with the hope of achieving their fertility intentions. LARC failure however, denies them their desired fertility goals.

1.3 Statement of the problem

LARCs are considered to be effective methods of contraception. Despite several barriers to take up and use LARCs in Kabale District, a considerable number of women often go to great lengths to overcome these barriers with the hope of achieving their fertility intentions. Women who have experienced contraceptive failure have clearly demonstrated their desire to avoid pregnancy and taken steps to prevent it. LARCs however are not always 100% effective and may fail with correct and consistent use. LARC failure denies the women their desired fertility goals.

LARC failure has implications to the individuals, their families and communities. With limited knowledge on resolving the LARC failure during perfect use by the affected individuals, there is need to understand the experiences of women who conceive while using LARCs and what effect these experiences has on the individuals, their families and communities. This study therefore seeks to establish the experiences of women who conceived while using long acting reversible contraception in Kabale district.

1.4 Research question

What are the experiences of women who conceived while using long acting reversible contraceptives in Kabale district?

1.5 Study objective

To understand the experiences of women who conceived while using LARCs in Kabale district.

1.5.1 Specific Objectives

1. To understand how women who conceived using LARCs in Kabale coped with unwanted pregnancies after the LARC failure.
2. To understand the socio-economic and health challenges faced by women who conceived using LARCs in Kabale after the LARC failure.
3. To determine the experiences of women who conceived using LARCs in Kabale after experiencing LARC failure.

1.6 Scope of the study

This study explored the experiences of women who conceived while using long acting reversible contraceptives. It was limited to the women who are currently pregnant or had pregnancies in the past resulting while using a long acting reversible contraceptive irrespective of the outcome of the pregnancy. Lon Acting Reversible contraceptives considered for this study were hormonal implants and intra uterine devices.

1.7 Significance of the Study

The study sought to make significant and original contribution to the knowledge of long acting reversible methods of contraception by understanding the experiences of women that experience LARC failure. The study explored how these women cope with the unplanned pregnancies resulting from LARC failure and make recommendations to family planning providers, spouses and communities on the kind of support that can be provided to the women who experience LARC failure to cope with the resulting pregnancies. This wss aimed at reducing the negative outcomes of unintended pregnancies towards improving maternal and child health, and social economic effects.

1.8 Theoretical framework

Bulatao and Lee's 1983 theory on the determinants of fertility in developing countries will be used to explore the experiences of women who conceived while using LARCs. According to the fertility decision making theory, fertility is viewed to be determined by number of children one can have, desire to have children and fertility regulation. The women who conceive while using LARC have the ability to have children, but do not desire to have children at the time when they conceive. They had chosen a fertility regulation method (LARC) to enable them achieve their fertility goals, however it failed against their fertility decision.

The theory also considers factors that determine whether a woman will use contraception or not. First, a woman should be able to access knowledge upon which the woman forms perceptions about the family planning method if she is to make a decision on her fertility regulation (Wright, 2012). These perceptions of supply (fecundity, child survival), demand (the value of children, sex preferences), and fertility regulation costs (characteristics of contraceptive methods, consequences of use) may differ from objective assessments.

More so, the decision making process is influenced by motivation. The drive to regulate one's fertility is influenced by the socio-economic status of the individual, their culture and family life cycle. A woman will adopt contraception after weighing the pros and cons of using Family Planning (Jacobstein et al. 2013). The theory therefore will be used to further explore the experiences of women who conceived while using LARCs by understanding their perceptions about fertility regulation before and after the LARCs had failed.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter consists of literature reviews on the studies related to experiences of women who conceived while using LARCs. It provides the overview of the long acting reversible contraceptives, their use, effectiveness and burden of LARC failure. The chapter provides information on the gap in understanding experiences of women that conceive while using LARCs, which this study sought to address.

2.2 Long Acting Reversible Contraceptives (LARCs)

Long Acting Reversible contraceptives (LARCs) comprise of intrauterine devices (IUDs) and hormonal implants:

IUDS

Intrauterine devices (IUDs), which are T-shaped devices that are inserted into a woman's uterus by a health care provider, were first used in the early 20th century (Ali et al. 2011). Different types and brands of IUDs exist. In Uganda, three examples of popular, widely available brands of IUDs are available; Mirena, TCu 380A, and ParaGard. Mirena is hormonal (containing progestin) and lasts up to 5 years while TCu 380A and ParaGards are copper impregnated and prevent pregnancy for up to 12 years (Ali et al. 2011). The IUD is removed by a health provider at the end of the period and fertility returns immediately after removal (Mansour et al. 2011).

It is suggested that intra uterine devices prevent unwanted or unplanned pregnancies by preventing sperm and eggs from meeting by either immobilizing the sperm on their way to the fallopian tubes or by changing the uterine lining so the fertilized egg cannot implant in it. According to the World Health Organization (2013), IUDs are thought to prevent contraception by causing a brief localized inflammation that begins about 24 hours after insertion. The inflammatory reaction inside the uterus attracts white blood cells, which produce substances that are toxic or poisonous to sperm. The progesterone-releasing IUDs also cause a subtle change in the lining of the uterus that impairs the implantation of the egg in the uterine wall. This type of IUD also alters the cervical mucus, which, in turn, inhibits sperm from passing through the cervix. The IUD is however not 100% effective in preventing pregnancies.

In order to minimise risk, Nanda, Schuler and Lenzi (2013) suggested that IUDs should be placed in the uterus by qualified physicians. It is also recommended that prior to placement of the IUD, the doctor takes a medical history, do a physical examination, and take a Pap smear test. And that women who have had tubal pregnancies, an abnormal Pap smear test, or abnormal vaginal bleeding are generally disqualified from using this form of contraception. Similarly, women who have STDs, an allergy to copper, severe menstrual pain, sex with multiple partners, or who are currently pregnant are not eligible for an IUD uptake (Kiene et al., 2013). Furthermore, it is recommended that if a woman is HIV positive but healthy, she is free to use any kind of IUD. In addition, for women with AIDS, it is important that they wait until the infection is under control before starting to use an IUD, while for women already using an IUD but have developed AIDS, it safer for them to keep using the device. More so, there are no age restrictions for women interested in using IUDs.

Individuals using IUDs may experience some side effects like perforation of the uterus, abnormal bleeding, and cramps according to the Food and Drug Administration (2015). Major or serious complications are rare, although IUD users may be at increased risk of developing pelvic inflammatory disease. Complications are more likely to occur during and immediately after insertion (ACOG, 2014) Meanwhile, Stephenson *et al.*, (2007), summed up the side effects by pointing to the fact that side effects of IUDs are limited primarily to the uterus and depend upon the type of IUD that is inserted. For example, the copper IUD may cause worsening of menstrual cramps and heavier menstrual bleeding, although hormonal IUDs usually reduce menstrual flow. Women with hormonal IUDs may have irregular periods and spotting, particularly in the first three to six months. It is also possible for the IUD to pass through (perforate) the uterine wall and enter the abdominal cavity, where it must be retrieved surgically.

Implants

Implants are also long-acting and highly effective at preventing pregnancy, with a clinical failure rate less than 1 percent (Hatcher, Trussell, and Nelson 2007; Rademacher et al. 2014). Implants are progestin-containing rods that are inserted under the skin and can prevent pregnancy for three to five years depending on the type (Ramchandran and Upadhyay 2007). Like IUDs, fertility returns immediately after removal. Insertion and removal of the contraceptive implant is a minor surgical procedure that requires a trained and skilled health provider to insert and removal the implant. Women cannot initiate or remove the implant by themselves.

According to McCauley and Geller (1992), contraceptive implants prevent pregnancy by increasing the cervical mucus thickening which blocks and prevents sperm penetration. It is also thought to suppress the cyclic maturation of the endometrial lining in preparation for an incoming fertilized egg and preventing ovulation. The implant user returns to fertility immediately after removal of the implant. Although the implants are highly effective up to 99% in preventing pregnancies, they are not 100% effective.

2.3 Use of long acting reversible contraceptives

The long acting reversible contraceptives can be used in the postpartum period or at interval (after post-partum) period. Both IUDs and Implants may be started immediately after delivery within 48 hours (Curtis, 2016). Since most LARCs do not contain estrogen, they are generally compatible with breastfeeding. The effectiveness of the LARC method however, varies with the timing of insertion. For instance, the rate of expulsion of IUD is higher when the IUD is inserted more than 48 hours after delivery compared to when it is inserted immediately after delivery of the placenta (The ACQUIRE Project, 2008). Insertion of IUD is therefore not recommended in the delayed post-partum period (48 hours to 4 weeks).

Despite the fact that the use of contraceptives in general is on the increase, the use of the more effective and reversible methods; IUD and implant is quiet low in developing countries. Comparing the long term reversible contraceptives, utilization of implant is higher than that of IUD. For instance, although the use of long acting methods (LARCs) was low in Ethiopia, 38% of women in a study had the intention to use any of the LARCs in the future, and for these, implant was the method highly (91.7%) favoured for future use followed by IUD (5.7%) women. In another study in the south-eastern part, the utilization rate of LARCs was 8.72%.

Of these 6.5% were using Norplant and 1.5% IUD. Again, eighteen point five percent (18.5%) of the respondents had ever used LARCs. The methods that had ever been used were 12.8% Norplant and 5.0% IUD (Takele et al., 2012; Meskele & Mekonnen, 2014). From the 2016 Uganda demographic health survey, implant uptake was at 16.7% while IUD uptake was 1.7% of all modern family planning users. This evidence indicates that implants are used more than IUDs in many developing countries.

The proportion of women using a long-acting reversible contraceptive (LARC) methods (IUD, implants) has however increased in low-income countries over the past few decades (Darroch 2012; Bertrand et al. 2013). In Uganda, areas where strong donor supported family planning programs were carried out through Reproductive health programs, use of LARCs is much higher than the national one (Sensalire, 2015). According to UBOS, 7.8 percent of all contraceptive users are using LARC i.e. IUD or Implants in Uganda in 2016. Although, LARCs are not medically indicated for all women or the appropriate choice for all couples, they offer an important form of protection for those who want to delay pregnancy for a longer time or limit births altogether, but who are not committed to a permanent method.

The decision to use, and the choice of family planning method also largely depend on marital status, age, parity and other social economic factors of the individuals. In a study to understand women's contraceptive method choices in slum and non-slum communities of Nairobi in Kenya, married women were more likely than never married women to use long-term methods of family planning. Women with three or more children and women working outside their homes or those in formal employment were also more likely to report using long acting reversible contraceptives than those with fewer children, in self-employment or unemployed

(Ochako et al, 2016). The categories of women who use LARCs more are also more likely to experience LARC failure.

The use of long acting reversible contraceptives and total share of method mix generally varies widely across countries and regions. The use of LARC methods was more among married than unmarried in half of the 69 countries whose LARC uptake data was reviewed in a study on discontinuation of LARCs (Staveteig et al, 2015). Individual preferences contribute to the differences in method choice. A study aimed at comparing factors that influence women's choice in contraception and women's knowledge and attitudes towards LARC by HIV-status in Cape Town, South Africa, found no difference in use by HIV status (89.8% HIV positive and 89% HIV negative Crede et al., 2012).

Khan *et al.*, (2008), explained that variations in IUDs uptake and use among women depend on the range of methods available, patient choice, prevalent health and religious beliefs, perceptions of method effectiveness, and side effects (for example, women may have less tolerance for heavy and prolonged vaginal bleeding than amenorrhea). It is indicated that correct use of most contraceptive methods requires a basic knowledge of reproduction and ability to follow written instructions. Yet in many countries, women are unable to make autonomous decisions about their sexual and reproductive health due to lack of economic independence, and prevailing cultural or religious attitudes to women's rights (Whitaker *et al.*, 2008), and these attributes affect effective utilization of LARCs

Discontinuation of a method occurs when there is method failure (pregnancy while using the method), when a woman no longer needs the contraception (because of a desire to become pregnant, infrequent sex, no partner, or menopause), or when a woman is dissatisfied with her

method or cannot access or afford it. Discontinuation may result in pregnancy, switching to another method, or abandonment of all contraception. Desire for a more effective method is the most common reason for discontinuation (Bradley et al, 2009). Discontinuation while still in need or discontinuation due to contraceptive failure is of particular concern when it leaves women at risk of or with an unwanted pregnancy, which is true for 15 to 20 percent of LARC users three months after discontinuation (Staveteig, 2017). Some level of method dissatisfaction and side effects are expected with any method, but high levels of discontinuation put women at risk of an unintended pregnancy.

2.4 Effectiveness of LARCs

LARCs are medical devices that are considered highly effective at preventing unintended pregnancy over long periods of time, but are easily reversible, allowing for pregnancy later in life. These methods function to eliminate the effect of user error on contraceptive failure rates – they can claim virtually no distinction between perfect and typical use failure rates. A 2012 study by winner et al, enrolled a prospective cohort of 7,486 women in a 3-year study where participants were provider their choice of hormonal contraception at no cost. Contraceptive failure rates were found to be much higher among those using the patch, pill, and ring compared with LARC methods even after adjusting, for age, education, and pregnancy history (Winner et al. 2012). The LARCs do not require effort from the user to be effective. The high level of effectiveness and low failure rates give users confidence that they are protected from unwanted pregnancies for long periods of time.

Some long acting reversible contraceptives (contraceptive implant and hormonal IUD) have also been found to be highly effective for at least two additional years of use beyond Food and

Drug Authority (FDA) approved duration (McNicholas, 2017). A study on Serum etonogestrel evaluation demonstrated that the serum levels of etonogestrel, the active hormone in the implants and hormonal IUD, remained above the ovulation threshold for women in all Body Mass Index (BMI) classes. This gives users time to switch to another method or continue use of the LARC without getting unwanted pregnancies.

LARC are highly effective contraceptive methods with low failure rates. For instance, unintended pregnancies as a result of contraceptive failure of IUDs are rare and their incidence is reported 1.4 per 100 users (Sivin et al. 1991). These methods however, also have a wide spectrum of side effects; some are manageable and some of them are serious. Other complications such as ectopic pregnancy, spontaneous abortion, preterm delivery, septic abortion and chorioamnionitis. Ectopic pregnancies are important complications of conceiving due to contraception failure. The cumulative ectopic pregnancy rate was reported as 0.4% for Copper IUD (CuT380A). In a retrospective study evaluating the risk factors and pregnancy outcomes of 81 patients who conceived while using an Intra Uterine device, a LARC method, four pregnancies were found to be ectopic (Pregnancy growing outside the uterine cavity) while the other 77 pregnancies were found to grow inside the uterine cavity. When a pregnancy occurs within a period of use of a LARC, an ectopic pregnancy should be ruled out by ultra-sonographic examination. (Ekiz et al. 2016). These possible outcomes of pregnancies resulting from LARC failure increase the burden of the unwanted pregnancy on the women who conceive while using LARCs.

Other factors, especially displacement of device, also play an important role in IUD failure. Ideally, Women who choose to use LARC should be counselled comprehensively on the method including information on possible failure and any complications that may result before

they can start using it according to World Heath Organisation (2005). Women who have the IUD inserted are encouraged to go for follow-up visits at the end of first menses, 6 and 12 months after insertion, and yearly thereafter. Women may sometimes report IUD failure resulting from IUS expulsion without their knowledge and this should be ruled out.

According to the effectiveness studies for progesterone only implants, "failures" were attributed to faulty insertion technique, insertion at the wrong time during the menstrual cycle, insertion while already pregnant, expulsion of the implant, or drug- drug interaction (Cunningham, 2015) No pregnancies occurred in other post-marketing surveillance or clinical studies, confirming the need for health care providers to undergo proper training and certification before they start providing the implants (Irani et al. 2015). Family planning providers need to be competent in providing LARCs to reduce the chances of the method failing.

2.5 Factors associated to failure of LARCs

Actual method failure is said to be responsible for 10% of unintended pregnancies, with the remainder associated with poor adherence (Casterline et al. 2011). Hormonal methods however become less effective in HIV positive women using anti-retroviral drugs (Schwartz et al. 2012). Drug interactions with hormonal contraceptives are of concern, particularly when steroid metabolism is enhanced, because this may reduce contraceptive efficacy. Drugs including herbs, which are known to induce the cytochrome P450 (CYP) enzyme system in the liver which plays a significant role in drug metabolism, cause increased elimination of contraceptive steroids, resulting in reduced reliability and, consequently, unplanned pregnancy. These drugs include some antiepileptic's (carbamazepine, oxcarbazepine, phenytoin, phenobarbital,

primidone, topiramate), antibiotics (rifampicin, hifalutin), antifungals (griseofulvin), protease inhibitors (arenavirus, atazanavir, nelfinavir, lopinavir, saquinavir, ritonavir), and non-nucleoside reverse transcriptase inhibitors (efavirenz, nevirapine) according to Schwartz et al (2012). Women who are using any of the mentioned drugs should be given comprehensive information on the effect of these drugs on the hormonal implants and IUD to enable them make informed choices.

In a non-randomized evaluation study assessing the efficacy of levonorgestrel contraceptive implant among HIV infected Ugandan women on effavirenz or nevirapine based antiretroviral therapy (ART) co-administration, the incidence of unintended pregnancies was higher in the group which was on effavirenz based antiretroviral therapy than in the group on nevirapine based antiretroviral therapy over a period of one year (Scarci et al, 2016). With the increasing number of HIV positive women on antiretroviral therapy who desire to have children, HIV positive women on ART whose method of choice is the hormonal LARC should fully understand the implications before taking up the methods.

Another factor, which is thought to contribute to reduced concentration of levonorgestrel concentrations among implant users may be their body weight. Some studies demonstrate reduced concentration levels among women weighing more than 70Kg (Scarsi et al, 2016) and (Patel et al. 2016). This information should be provided to family planning users and acceptors during counselling to enable them make informed decisions. Weight gain is also reported as a side effect of hormonal implants although there are no studies to show that there is higher failure rate among implant users who gain weight while using the implant.

One of the major factors associated with failure for LARCs is quality of family planning service. Improved quality of care is an increasingly important goal of international family planning programs, for a variety of compelling reasons. From a human welfare perspective, all clients, no matter how poor, deserve courteous treatment, correct information, safe medical conditions and reliable products. It also has been argued that providing such quality services will lead to increased service utilization by more committed users, prevent unintended pregnancies, eventually resulting in higher contraceptive prevalence and lower fertility. A study on family planning service quality as a determinant of use of IUD in Egypt showed that the unadjusted relative risk ratios the quality of family planning services had a significant positive effect on the use of IUDs from public sources (RRR = 1.23; $p < 0.05$). (Tsui et al. 2010). Incorrectly inserting IUDs and implants, insertion of poorly stored or expired commodities is likely to result in method failure.

LARC failure may also be more prevalent among women of certain education status. In a study done in Guatemala showed that more women with high school or higher education (5.2%) use IUDs than women with elementary education (1.4%) or without formal schooling (0.4%). The incidence of LARC failure is proportional to the number of LARC users and is therefore more likely to be experienced by women with higher education since they are the ones that are likely to use the long acting reversible contraceptives. (Kavanaugh et al., 2013).

A study done on LARCs in Uganda showed that poor knowledge about the effect of the use of long-term methods on fertility as well as poor understanding of the procedures, which have led to the fuelling of myths and beliefs that hinder the successful promotion and adoption of family planning services (Anguzu et al, 2014). Low knowledge on the effectiveness of the various methods hinders informed choice. Some of the women who experience LARC failure may be

oblivious of the possibility of method failure at the time when they took up the method. This highlights a gap in the quality of family planning counselling by the health workers before giving the family planning methods

Knowledge, attitude, skills and experience, of providers are also among factors that influence the effectiveness of LARC services at health facilities. An internet based CME certified self-assessment about knowledge, skills, attitudes, barriers, and practices relating to LARC methods was administered for free to physicians, physician assistants, and nurses and advance practice nurses. The first-year typical-use failure rate of combined hormonal contraceptives and injection was underestimated by 28-63% of physicians and 56% of nurses. When measured against current Centre for Disease Control and Prevention (CDC) practice recommendations, 46% of ob-gyns, 70% of primary care physicians, and 41% of nurses did not correctly identify when (during the menstrual cycle) to place LARCs; 61%, 90%, and 81% indicated performing unnecessary medical assessments before implant use; 39%, 57%, and 61% misidentified the mechanisms of action for the levonorgestrel IUD; 68%, 78%, and 75% did not use recommended IUD placement techniques; and 86%, 85%, and 88% underestimated IUD placement pain, respectively. These factors can affect effective counselling and ability to offer contraceptive services leading to failure of LARCs among users. (Mosha et al. 2013). If contraceptive implant is wrongly inserted in muscle, it may not be as effective as when correctly inserted under the skin. Similarly if the IUD is not inserted correctly, the user is likely to conceive (Bertrand et al. 2013).

A study conducted in Pakistan (Alemayehu et al. 2012) found that the women perceived that the family planning staff in the centres or the lady doctors (general practitioners) were not trained in inserting IUD. They also perceived that the clinic environment in terms of the

required space, privacy and facility to insert IUD will be not suitable. This is because the providers did not offer counselling or were reluctant in offering this method. In addition, many of the health and family planning service providers, who were trained in IUD insertion, felt they did not have enough practical experience. Therefore, they avoid inserting the IUD and do not offer any counselling. However, if a woman accepts this method, they refer her to a suitably trained service provider (Greydanus, 2013). This study will explore some of the perceptions the women who experienced LARC failure had about the provider skills before and after conceiving.

Health providers influence LARC decision making, sometimes preventing and other times facilitating their uptake (Mellisa et al, 2012). The provider-related barriers and drivers are important as these are potentially modifiable. Health providers are supposed to inform all potential users about the method, and to prescribe it to clients who require it. On the other hand, health providers' attitude regarding the LARCs plays an important role, either in choosing other contraceptives or continuing with LARCs. Medical workers' attitudes affect how providers counsel about the LARCs. There is usually a difference between what providers says when asked what they counsel about IUDs and what clients report when asked what they are counseled on LARCs. In a study by Amna and Shaikh (2013), all providers seemed to have reservations regarding IUD provision which is attributed to lack of knowledge about the contraindications for the IUD and to a reluctance to commit the time and effort to inserting the device especially in an environment where providers feel over-burdened and under-supplied and therefore they admitted they do not counsel for it. Some clients have reported that their provider recommended and even insisted on the IUD even if it was not their choice for using such device (Melissa *et al.*, 2012).

Perceived spousal support for contraception and support through discussion about family planning have been found to be factors affecting the use of family planning services resulting to failure of LARCs. The retrospective study on effectiveness of LARCs users in Uganda (Khan et al. 2008; UBOS 2012; Maiden Guttmacher 2013) found that in only about one half of the cases (44.4%) the decision to opt for LARCs had been shared by both partners) were found to be more effective. Spousal involvement and support enhances informed decision making and adherence to recommended practices while using LARCs. For instance, in regards to when to initiate intercourse after insertion of the contraceptive implant and follow up visits to the health provider after insertion. This study will further explore how partner involvement influences the experiences of women who conceive while using LARCs.

Opposition by male partners is one of the barriers to contraceptive use in sub-Saharan Africa. Women often have to use the family planning method in secrecy which may affect the effectiveness of the method. In a study to determine the extent of male partner involvement in female contraceptive choices, 56.4% of 243 women interviewed had made the contraceptive decisions jointly with their partners. Covert contraceptive use rate was 4.9% i.e. women who used contraceptives without their partner's knowledge (Ajah et al, 2015). Some of the reasons for men's limited involvement and opposition include: perceived side effects of female contraceptive methods which disrupt sexual activity, limited choices of available male contraceptives, including fear and concerns relating to vasectomy, perceptions that reproductive health was a woman's prerogative due to gender norms and traditional beliefs preference for large family sizes which are uninhibited by prolonged birth spacing; and concerns that women's use of contraceptives will lead to extramarital sexual relations. Involving men in fertility decisions is likely to reduce failure rates according to Kabagenyi et al (2014).

2.6 Consequences of long acting reversible contraceptive failure and burden of unwanted pregnancies

Using long acting reversible contraceptive methods offers many advantages in health and economy of the couple and the country. The primary aim of using LARCs by individuals or couples is to plan their families and space their children through the use of the long acting reversible contraceptives. Raising a child requires significant amounts of resources: time, social, financial, and environmental. Using LARCs benefits the health and well-being of women and families. (Ahmed et al. 2012). Unplanned pregnancies resulting from LARC failure have effects on the individual's or family health and economy

Regardless of the cause, unplanned pregnancies usually have far reaching consequences on the mother and child as most of them end in unsafe abortions or poorly planned births. Unintended pregnancy results in unsafe abortions, has negative effects on women's health and the health of new-borns, and imposes a considerable personal burden as well as a financial burden on families and society. Approximately half of unintended pregnancies result from contraceptive failure, usually owing to incorrect or inconsistent use of contraception. Unintended pregnancies among LARC users are rare and occur in about 1% of the users. (Winner et al. 2012). Although the unplanned pregnancies among LARC users are rare, they still have consequences on the women that experience them.

LARC failure contributes to raising levels of unintended births and induced abortion, as the vast majority of contraceptive failures result in either one or the other outcome. Proportions are higher in countries with higher levels of LARC use, as the proportion of unintended

pregnancies that are due to contraceptive failure is directly linked to the proportion of the population using contraception: in a theoretical population with a 100 percent contraceptive prevalence rate, 100 percent of unintended pregnancies would be due to contraceptive failure. Therefore the higher the number of LARC users, the higher the chances of encountering a woman who has experienced LARC failure (M.Ali et al. 2012).

Women who carry unintended pregnancies to term may be less likely to seek antenatal care in the first trimester and delivery assistance (Gipson, Koenig, and Hindin 2008; Moosazadeh et al. 2014) resulting in additional maternal deaths, and contributing to more than one million preventable stillbirths (Bhutta et al, 2011) and the 3.6 million neonatal deaths annually (Black et al. 2010) that may have been prevented with proper care. If they survive the neonatal period, evidence suggests that children born as a result of unintended pregnancies are less likely to be breastfed and more likely to be stunted than wanted children, and are at higher risk for child mortality (Gipson, Koenig, and Hindin, 2008). Women who experience LARC failure are also likely to have abortions and unplanned births contributing to increased maternal complications and deaths.

Women who experience unplanned pregnancies may experience psychological distress due to poorer quality relationships with partners and may receive less support resulting from unplanned pregnancies according to Bahk et al (2015). There are also higher levels of marital conflict and lower participation of the spouses of child's father in caring for the child. The unintended pregnancy may result in lone motherhood or termination of the pregnancy. The unintended pregnancy may also result in postpartum affective disorders such as depression and anxiety (Elsenbruch, 2005).

Unplanned pregnancies also have effects on partners of women experiencing unplanned pregnancies. In a comparison on coping and stress among fathers with new-borns study, it was found that fathers with unplanned pregnancies were found to be significantly more stressed about numerous issues as well as feeling powerless in adapting to the arrival of a new infant compared to the fathers who had planned pregnancies. The commonest reasons cited for the stress included; finances, living situation, marital situation, sex, recreation, and friendships. The most common coping strategies were trying to control a situation, thinking through ways to solve the problem, finding out more about the situation, setting goals, and actively trying to change the situation. Few of the men used the following coping strategies: taking drugs, getting mad, feeling hopeless, drinking, crying/getting depressed, or blaming others (Clinton and Kelber, 1993). This study therefore sought to understand the experiences of the women who experienced LARC failure which is not a common occurrence.

3 CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes how the study was conducted in Kabale district, in South Western region of Uganda. It highlights the research design, target population, area of study, study population, sample size and sampling technique, instruments for data collection and management, ethical considerations and limitations.

3.2 Research design

A descriptive qualitative study design was adopted. Descriptive study design was used because it is, according to Sandelowski (2010), theoretically based in naturalism and will likely stay as near to the data as possible. It allows the participant to narrate their experiences with little interference from the interviewer and gain deeper understanding of the phenomenon under study. The study was also explorative in nature as publications relating to family planning were reviewed to provide deep insights into the impact of failure of LARC among users in Kabale district

3.3 Population

A target population is defined as subjects who are intended to be studied, or in other words the group that meets the criteria targeted for the study. The study population in this study was women who have conceived while using LARCs in Kabale district.

3.4 Area of study

The study was conducted in Kabale in South western Uganda. The participants were identified from the communities within the catchments of the six (6) HCIVs in Kabale District. Using VHTs attached to the HCIVs as the entry point to the communities, the participants were identified in their communities.

3.5 Sources of data

Primary sources: Women who have experienced LARC failure were purposively selected from the catchment area of 3 HCIVs in Kabale district. Health Centre IVs were considered since the LARCs are administered at this level of health facility in the public sector. Data was obtained through face to face in-depth interviews with the sampled women who have experienced LARC failure.

Secondary sources: Secondary data was obtained from publications and peer-reviewed articles by other scholars in the area of Family planning specifically LARCs.

3.6 Sample size

The study intended to interview fourteen participants but, there was saturation after interviewing thirteen participants. According to Brink et al (2013), a size can be considered adequate if new participants fail to generate any new findings and at that point the data is

considered to be rich and thick. Creswell and Poth (2017) also states that the number of participants between 5-25 participants is adequate.

3.7 Sampling techniques

Non-probability sampling method was used as the technique. For this study, thirteen participants were purposively selected and interviewed for their experiences. The participants were purposively selected given the private nature of family planning use and the number of people who have had this experience being few. With purposive sampling, individuals who are rich with information that provides the greatest insight into the research question will be selected (Devers and Frankel, 2000). Village health teams (VHTs) were used to identify the participants within the targeted study population.

3.8 Data collection methods and instruments

During the study, data was collected primarily through, in-depth face-to-face interviews so as to allow the participants to express their experiences in their own words. In depth interview guide was used to conduct the interviews. The interview guide was structured around the core themes of questions and included probing questions to guide the participants if they deviated. Through interviews emotions, expressions and other behaviours, which were important in understanding the phenomenon from the participants' perspective were also captured (Creswell, 2013). Additional data was obtained from field observations to provide more meaning to the interview scripts.

The participants were free to choose the location of the interview which allowed maximum freedom for them to choose a comfortable and private place to speak. The Interviews took place in the participants' homes, and any other place within the community that was chosen by the participants and deemed convenient for them. The interviews were conducted in the participant's local language and were tape-recorded. Verbal consent was also obtained to audio record the interview, after explaining to the participants the purpose of the study and giving them an opportunity to ask questions. Participants were also given information sheets about the study for reference. The length of the interview was flexible to allow time for building rapport with the participants and also allow the participants enough time to recall their experiences. During the interviews, key words and themes that were repeatedly used were noted down. The notes were then reviewed in subsequent interviews and revisited during the analysis process

3.9 Data quality control methods

3.9.1 Inclusion criteria

The study only included those women who conceived with the intra uterine device or implant in situ including those who were still pregnant at the time of the interviews. The participants included were of reproductive age

3.9.2 Exclusion criteria

The study did not include women who conceived due to expulsion of the intra uterine device or implant without their knowledge. Those who had the intra uterine device or implant inserted while already pregnant were also excluded.

3.10 Data management and analysis

3.10.1 Data Management

The recordings from the interviews were transferred from the recorder to the computer that requires logins only for authorized personnel to protect participant information. The data were transcribed and the recordings on the computer were then kept under passwords. The recordings and study items will be kept for five years after which they will be destroyed.

3.10.2 Data Analysis

All interviews from the thirteen participants were transcribed verbatim from the recorders and entered into a Microsoft Word processing program in preparation for data analysis. The textual data was analysed using the content analysis method. Content analysis was used in order to describe participants' point of view in a legitimate way to find the underlying meaning of their thoughts. (Kvale and Brinkmann, 2009). Copies of transcribed text were printed, read and coded manually to identify concepts, patterns and emerging themes relating to study objectives. The themes were classified into categories.

The data were reviewed to identify the emerging themes from the transcripts. All data relevant to each category were identified and examined using the process of constant comparison, in which each item was checked or compared with the rest of the data in order to establish analytical categories that were used to inform the report writing. During report writing, rich

and relevant textual quotes were identified and used to support the emerging themes and categories of data.

3.11 Ethical consideration

During the study and throughout the research process, several ethical aspects were taken into consideration.

3.11.1 Study approval

Permission to conduct the study was obtained from the necessary institutions and authorities: Approval by the Uganda Martyrs University Research Committee and permission from the Kabale District Health Officer's office were sought to carry out the study at the public health centre IVs in Kabale District.

3.11.2 Consent

A written consent form was read to all the selected respondents to participate in the study after the purpose of the study has been explained to them. The consent form was drafted in English and translated into Rukiga, the local language understood by respondents. Consent was sought from respondents with good mental capacity to make informed decisions to participate in the study. The participants were provided with information sheets with details about the study and purpose to provide more clarity about the intentions of the study.

3.11.3 Confidentiality and privacy of respondents

Respect of privacy and confidentiality of all participants in the study was observed. Interviews were conducted face to face in private places within their households. The participants were free to choose the most convenient locations for them to be interviewed.

3.12 Limitation of the study

Recall bias: the study relied on self-reported behaviours of the women and thus the results may not be as accurate as possible. Probing was used without coercing for responses to ensure the respondents are able to easily express themselves with what exactly transpired in the process. Respondent willingness to participate in the study was also enhanced by the rapport that was established by the researcher. This was to increase trust in the participants to open up for the study and provide as much information as possible.

4 CHAPTER FOUR: RESULTS

4.1 Presentation of results

4.1.1 Introduction

This chapter highlights key findings from conducting in-depth interviews with women who experienced LARC failure. The study findings are related to existing literature and in reference to the fertility decision making theory that was used to explore these experiences to make meaning out of the participants verbatim. Three themes that arose from the study are discussed.

Table 1*: Summary of the characteristics of the participants*

Participant	Age	Marital status	HIV status	Number of Children	On ART	Type of LARC	Years of effectiveness of LARC	Period at failure
LF1	24	Married	Positive	3	Yes	Implant	3	2 Y 9M
LF2	27	Married	Positive	4	Yes	Implant	5	2Y
LF3	30	Married	Positive	6	Yes	Implant	3	2Y
LF4	23	Married	Positive	3	Yes	Implant	5	3Y
LF5	24	Married	Positive	4	Yes	Implant	3	9M
LF6	28	Married	Positive	3	Yes	Implant	3	2Y
LF7	35	Married	Negative	6		IUD	10	11M
LF8	31	Married	Positive	4	Yes	IUD	10	3Y
LF9	36	Married	Negative	7		IUD	10	1Y 3M
LF10	22	Married	Negative	2		Implant	5	7M
LF11	29	Separated	Positive	4	Yes	Implant	5	4Y

LF12	32	Married	Positive	5	Yes	Implant	3	2Y
LF13	27	Married	Positive	3	Yes	IUD	10	2Y 3M

Many of the women interviewed were in their 20's and 30's. This is the age bracket within reproductive age where women commonly need and use contraceptives to control their fertility. The women interviewed were also mostly married or individuals with families, who were looking for a family planning method to help them space or limit births. The study also found out that many of the women interviewed were women who were HIV positive and were on HIV treatment. That clearly indicated a conscious effort by HIV positive women to prevent unplanned pregnancies. These women mainly reported failure of hormonal implants. The effectiveness of the implant was reported to have been reduced by the HIV treatment.

> *"When I went back to the health facility to find out what could have happened, the health workers told me that the ARVs we take daily overpower the implants"* **LF1 24 years, 3 children and HIV positive, 4/6/2018**

> *"When I told the nurse, she wasn't shocked. She just told me that I am not alone. She told me that for hormonal implants, I was like the third person from the HIV clinic to have conceived with the implant.* **LF5 24years, HIV positive, 7/6/2018**

It was surprising to discover that health workers negligently provide hormonal LARCs to the HIV positive clients without giving them information on LARC effectiveness and drug interactions yet, the health workers are well aware of this information. There is need to understand the reasons behind health worker's inadequate counselling to family planning

clients such that the reasons can be addressed effectively. Family planning providers are supposed to inform the HIV positive clients about this drug interaction and help them to choose a more appropriate method.

To answer the overarching aim of the research, the findings have been structured according the categories found. In the following section, each theme and its sub themes are highlighted. Direct quotes from the participants are used to help the reader understand the analysis on the bedrock of participant's verbatim.

4.2 Coping with the unwanted pregnancies after the LARC failure.

Dealing with an unwanted pregnancy, having made efforts to prevent a pregnancy was hard and devastating for most of the participants regardless of social status. Some were surprised and shocked to learn of the failure as it was unexpected while others were not surprised about the LARCs failing. The emotions mostly expressed were a sense of betrayal felt when the method they had high hopes in to prevent unwanted pregnancies did not work. The reactions of the participants were similar to those reported by Aziato et al (2015).

4.2.1 Reaction of women on realizing they were pregnant

Participants reported being disappointed and feeling betrayed by the LARCs after discovering they were pregnant.

> "… (Tears rolling down her cheeks) ... I can't begin to describe to you what I felt. I wanted to die. I wanted the ground to swallow me. I was so disappointed in the implant".
>
> **LF6 28 years, HIV positive, 8/6/2018**

"After using the injectable and conceiving on it, I could not believe that the IUD had also failed. I was not aware that the IUD can also fail. I felt betrayed and angry. I wish they had told me" **LF7 35 years, HIV negative, 9/6/2018**

Those who were oblivious of the possibility of failure at the time they took up the method were more devastated. They had no knowledge about the possibility and causes of IUD and implant failure, which highlighted a key gap in counselling offered to family planning clients before they took up the family planning methods. They probably would have opted for more appropriate alternatives if they had been informed before. According to Tessema et al (2016), one of the identified six elements of quality of care in family planning programs that reflect aspects of services, which clients experience as critical is information given to clients. This however, was not the case in the family planning services offered to these women in Kabale.

Some were scared by the thought of being pregnant with a contraceptive method still in their bodies, others thought that the contraceptive method would cause miscarriage while others had fears and misconceptions about the pregnancies acquired while on LARC.

"The thought of being pregnant while having the IUD inside me scared me a lot. I wondered what was going on inside me. I thought I was going to have a miscarriage and the baby would come out holding it". **LF8 31 years, HIV positive 12/6/2018**

These LARC users had no clear understanding of the reproductive anatomy and where the method could be located in relation to the pregnancy. Counseling received before taking up the methods did not give comprehensive information about the effectiveness, insertion procedure

and where the method is inserted. It also did not address most of the common fears, myths and misconceptions about the method. Post conception counselling for those who experience LARC failure also did not fully address the concerns, fears and misconceptions that the individuals may have had after LARC failure. Without prior information about LARC failure, LARC users form their own opinions about the effect of the family planning method on the pregnancy and unborn baby. This leads to fuelling of myths, misconceptions and fears about family planning.

Respondents' also expressed lack of privacy and individualised information while receiving information about family planning prior to taking up a method.

> "They (health workers) had not even told me that the drugs (ARVs) can affect the implant. They only came to tell me after I had conceived with it. I remember a health worker only told us in a group when I had gone for my ARV refill that family planning methods were available for those who wanted to avoid unwanted pregnancies and nothing else*"* **LF2 27 years, HIV positive, 5/6/2018**

Family planning is a private matter that many people are not willing to discuss publicly. When information is given in a group setting, the clients fear to ask personal questions such as those regarding their HIV status, which would have enabled the health worker to assess eligibility of the client to use the method and any contraindications the client may have. This results in the clients taking up the methods, which are not appropriate because there is no privacy or individualized counselling and assessment where clients and providers discuss freely.

Some participants thought they were given expired drugs, which could have resulted in the LARC failure.

> "… I told myself that maybe the implant they gave me was expired. I didn't want to believe that the implant can fail because I had used it before without any problem". **LF3 30 years, HIV positive, 6/6/2018**

> *"I got so annoyed and disappointed because I never wanted to get pregnant at that time; I thought that probably they gave me expired implant or that maybe they gave me an implant for fewer years than I had requested".* **LF2 27 years, HIV positive, 5/6/2018**

It shows that family planning clients are not given a chance to have a look at the contraceptives before they are inserted in their bodies, let alone see the expiry date. They are therefore not sure what is being inserted, how and the expiry date. All this points to the quality of counselling they received.

Participants who were HIV positive reported being worried about infecting their unborn babies with HIV. This is a noteworthy concern as no mother would want their baby to be born with HIV especially when they had taken precaution to avoid the pregnancy.

> *"I got so worried. I knew I was going to have an HIV positive baby. It worried me a lot from the time I found out about the pregnancy"*. **LF2 27 years, HIV positive, 5/6/2018**

The verbatim is in agreement with findings by Baek and Rutenberg (2015). Using family planning methods is known to prevent mother to child transmission of HIV by preventing unplanned pregnancies. HIV positive women rightly become worried when they have unwanted pregnancies. Health workers seem to focus more on providing HIV care than providing holistic care to the HIV positive women.

Some of the participants reported having contemplated abortion when they discovered they were pregnant although most of them did not go through with the abortions.

> *"I couldn't believe that they had just confirmed my worst fear at the time. I broke down. I cried uncontrollably. I was inconsolable. I kept asking: why me? Why this time? I wanted to have an abortion but I didn't know where to go.* **LF6, 28 years HIV positive, 8/6/2018.**

This shows how much they did not want another pregnancy or another child at the time, even though they eventually decided to keep the pregnancies. Whereas some women opt to keep the pregnancy, others will go ahead and have abortions most of which are unsafe especially in Uganda where abortion is illegal. The study findings are similar to what Ali et al (2012) described.

Much as most of the participants expressed disappointment, a few acknowledged not being surprised especially those who had been provided with information about method effectiveness and failure.

> *"… Because I had never told him about being on family planning. I can never. I just use a method without his knowledge. In fact, after I had gotten the implant, the health*

worker had told me not to have unprotected sex for 7 days but when I went home, I couldn't tell my husband. When they told me I was pregnant, I remembered that they had told me I could get pregnant. I was not surprised at all". **LF7 35 years, HIV negative, 9/6/2018**

Participants who admitted not following guidance on when to resume sex after inserting the LARC despite receiving information attributed this to lack of cooperation from their partners or using the LARC covertly. In sub Saharan Africa, many women have been found to be using contraception without their partners' knowledge due to cultural or religious influences (Ajah et al, 2015). This could have caused the women to use the LARCs in hiding and then later have the added burden of becoming pregnant while on contraception, a worry they had to keep to themselves. For participants whose partners were not aware of them using any form of contraception, social cultural beliefs were cited as the main reason for partner disapproval. For instance: perceptions that reproductive health was a woman's role; preference for large family sizes, which are inhibited by using contraceptives, and concerns that women's use of contraceptives will lead to extramarital sexual affairs were the common reasons for men not wanting their wives to use any form of contraception. Social cultural barriers therefore can lead to LARC failure and need to be put into consideration and explored by family planning providers when giving the methods.

4.2.2 Reaction of spouses and community after realizing the pregnancy

The study found that out of the thirteen participants, seven women had negative reactions from their spouses about unintended pregnancy. The women who participated in the study reported some spouses who were disappointed in the LARCs especially those who were aware of their

wives using the methods. Some spouses were angry and hostile towards them for becoming pregnant, some would welcome the pregnancy while others were indifferent about the news of the pregnancy. This is of particular concern as it can be a source of domestic violence among couples.

> "*… When I finally told him, he was so disturbed. He was annoyed that I was pregnant. He thought I had lied to him about using the IUD*." **LF9 36 years old, HIV negative, 13/6/2018**

Some of the spouses to the participants were not aware that the women were using contraception to begin with. These women had to deal with the disappointments on their own which can be daunting in the face of a big disappointment as these individuals have no one to turn to for comfort

"*...Hmm… He is never interested in those things. He did not know that I was using any family planning method*". **LF7 35 years, HIV negative, 9/6/2018**

"*He didn't even know that I was using any family planning method. He just sees me getting pregnant and delivering. He doesn't like family planning methods because he used to tell me that they are harmful. That's why I never bother telling him that I am using it*. **LF10 22 years, HIV negative, 14/6/2018**

The verbatim in relation to what Ajah et al (2015) illustrates how the burden of child bearing is largely on the woman with some men showing little or no interest in family planning while others are opposed to their wives using family planning methods.

Those whose spouses knew they were using LARC, thought they had lied about being on a family planning method.

> *"He said and actually up to now believes that I lied to him about the implant. The support he used to give me reduced after that; he wasn't in the mood of any pregnancy at the moment.*" **LF7, 35 years, married with 6 children, HIV negative, 9/6/2018**

> *"He was shocked because I had told him am using an implant; He thought I had lied to him about being on a family planning method. He even went and inquired about the possibility of LARC failing yet it was recommended by the health workers. He then told me to go for tubal ligation immediately after giving birth"*. **LF8, 31 years, married with 4 children. HIV positive, 12/6/2018**

Some women reported that their spouses asked them to terminate the pregnancy because they were not ready take care of the pregnancy or have another child.

> *"He told me to abort the pregnancy; because he didn't want any baby at the time".* **LF5, 24 years Married with 4 children. HIV positive, 7/6/2018**

If men force women to abort, many women are likely to go ahead with the abortion because men are decision makers in the home. This contributes to the number of women who have abortions and the consequences that come with them.

Most of their friends in the community were supportive although some were not aware that these women were using any contraception as contraceptives are reportedly used in private. Others increased their anxieties about the pregnancies they were carrying.

> *"I had some few friends of mine who knew that I was on family planning and now when I told them I as pregnant they were shocked.* **LF4 23-year-old mother with 3 children, HIV positive, 6/6/2018**

The findings also revealed that women felt embarrassed amongst the friends and community members who knew they were using LARC. They reported being laughed at for using methods they were not sure of instead of the common methods of condoms and injectable that were being used by the majority where no failures had been reported in the community. Some of their fellow women who were using LARCs said that they had received counterfeit LARCs. Others would tease them about being pregnant after swearing never to have any more children

> *"My friends would just laugh at me jokingly saying that I had been given counterfeit implant".* **LF11, 29 years, separated with 4 children. HIV positive, 15/6/2018**

> *"They couldn't stop teasing me about it. Not after I had sworn never to have any more children".* **LF9, 36 years of age, married with 7 children, 13/6/2018**

The results showed that women who failed on LARC faced challenges not only in their households, but even the community since they interact frequently with the community especially while seeking services at the health facilities.

4.2.3 Caring for the pregnancy

From the study, some women who conceived while using LARC took long to come to terms with the unplanned pregnancies, others hated the pregnancies while others quickly came to terms with what had happened and accepted to take care of the pregnancy. Caring for the unplanned pregnancies was not easy since this was not expected and unplanned for. The participants who reported to have gone for ante natal care services were motivated by the desire to have healthy babies especially the HIV positive mothers.

> "*Every time we went to the HIV clinic for medicines, they would educate us about the importance of going for antenatal care to receive proper care to prevent transmitting HIV to our babies*". **LF1: 24 years, Married with 3 children, HIV positive, 4/6/2018**

HIV positive women face an increased risk for complications following an unplanned pregnancy, including the risk of vertical transmission of HIV. This is in agreement with Scarsi et al (2016). Although, having an HIV-free baby motivated most HIV positive mothers to seek antenatal care services, some however, failed or took long to come to terms with the pregnancies and did not seek antenatal care services even when they knew the risk to their babies and others simply did not suspect that they were pregnant until very late into the pregnancy.

> "*I hated the pregnancy so I didn't bother going for any checkups. I could |not wait to deliver and I go for a permanent method"*. **LF8: 31 years, Married with 4 children, HIV positive, 12/6/2018**

> "*I know it was selfish of me not to go for ante natal care but at the time I didn't think about all that. You know they (health workers) always teach us about having HIV free*

babies but I was so depressed and didn't go for ante natal services." **LF3 30 years, HIV positive, 6/6/2018**

Similar to what Hellerstedt et al (1998) described, the verbatim shows that women with unintended pregnancy may be less motivated to adopt behaviors that are less harmful or would benefit a fetus because of more immediate psychological, social and emotional needs. Much as they were told and knew the importance of receiving proper antenatal care, they did not seek the services.

There were participants who reported that the pregnancies were filled with anxiety and depressive episodes.

"I just decided to go for ante natal care and every time they would ask me something I would just shed tears." **LF2: 27 years, married with 4 children and HIV positive, 5/6/2018**

"I ended up being sad and angry at everything most of the time until I delivered. **LF5 24 years old, HIV positive, 7/6/2018**

The verbatim, which is in agreement with Bahk et al (2015), reveals that women with unwanted pregnancies are faced with mental health challenges. These mothers would benefit from having mental health assessments and psycho-social support as part of antenatal care in order for them to deal with these challenges.

4.2.4 Fear and uncertainties about the pregnancy outcomes

Participants reported that the pregnancies were filled with fears and uncertainties over the outcomes of the pregnancies.

> *"I didn't know what to expect. How was it even possible for me to be pregnant? I thought I was going to have an abnormal baby."* **LF11 29 years, HIV positive, 15/6/2018**

> *"I have ever heard of cases where some babies are deformed and not healthy as a result of family planning methods used by the women*". *My friends also kept telling me that I could get a deformed baby"*. **LF7, 35 years, married with 6 children, HIV negative, 7/6/2018**

> *"I thought the implant was going to cause a miscarriage and the pregnancy doesn't go up to 9 months"*. **LF11, 29 years, separated with 4 children. HIV positive, 15/6/2018**

Most of them did not know whether the contraceptives they were using when they conceived would have effects on their unborn babies or the progress of the pregnancy and their fears were not allayed by anyone. This also contributes to fueling of myths and misconceptions. These concerns of the participants show that the women who conceive while using LARCs experience fears and uncertainties about the pregnancy outcomes.

HIV positive women were not sure of having HIV negative babies since they had not taken pre-conception measures to prevent mother to child transmission of HIV to their unborn babies. Most of their worries were about having HIV positive babies.

"When I got pregnant, the first thought that crossed my mind was that my baby will be born HIV+ and that scared me a lot. And we always thought that once you conceive while on LARC you would give birth to a deformed baby or one without a body part or half parts. I was worried that I may give birth to a deformed baby or one with a problem". **LF4, 23 years, married with 3 children. HIV positive, 6/6/2018**

The study findings also indicated that women who received counseling from the health workers and their spouses were able to cope easily with the pregnancies.

"She (Nurse) told me that it does not harm the unborn baby. She told me to have it removed as soon as possible and start attending antenatal care clinic" I believed her because she is a health worker and I stopped worrying. She helped me to get over the fears I had. **LF8: 26 years, married with 4 children, HIV positive, 12/6/2018**

"What was worrying me most was my baby's health. I never wanted my baby to be HIV+ but the nurse told me that since I had been taking my ARVs well and I was healthy, the chances were reduced. That gave me hope that I would have an HIV free baby and I made sure that I followed all instructions they gave me". **LF3: 30 years, married with 6 children, HIV positive, 6/6/2018**

Similar to what was reported by Asefa and Mitike in 2014, mothers are usually very concerned about their babies having HIV and will use this as motivation to seek for the appropriate care to prevent their babies from acquiring HIV.

4.3 Socio-economic challenges faced by women after LARC failure.

Women reportedly have the main responsibility of looking after the home and fending for the children in most household visited during the study. Majority of the men were said to be working away from home while others were usually at drinking joints in trading centers. Raising a child requires significant amounts of resources: time, social, financial, and environmental. Using family planning services is expected to result in substantial improvements in women's earnings and household incomes according to Stover and Ross (2010). The participants however were rendered less productive and unable to contribute to household incomes because of being pregnant after the LARCs failed. In this case, using LARC did not result in the anticipated benefits for the users. Women who experience LARC failure reported some social and economic challenges highlighted below.

4.3.1 Financial, material and moral support from the partner

In this study, women reported of partners who never supported them financially, materially or morally despite them not being productive due to the pregnancy.

> *"Because we were not ready for another baby at that time, my husband never supported me at all. Whatever I asked for from him, he refused to give me yet I had no savings of my own".* **LF1 24 years, Married with 3 children HIV positive mother, 4/6/2018**

> *"He never supported me in any way. He did not want me to have the baby to begin with, so he told me to take care of the pregnancy by myself".* **LF7, 35 years, married with 6 children, HIV negative, 9/6/2018**

This means that these women who were already struggling financially and materially had an additional burden of continuing to fend for their families while coping with the physical demands of pregnancy on their bodies. This study revealed that women who had support from their partners easily adopted to the situation of accepting the pregnancy since the partners were willing to support them in caring for the pregnancy.

> *"He was okay with the pregnancy. He supported me throughout pregnancy and remained taking care of me and the whole family"*. **LF2 27 years married with 4 children and HIV positive, 5/6/2018**

> *"He was supportive since this had already happened and used to escort me for antenatal care visits so that we do not get an HIV positive baby".* **LF11, 29 years, separated with 4 children. HIV positive, 15/6/2018**

> *"Truthfully my husband's job isn't that well-paying but he was very supportive and gave me everything that I needed. But I also remained working; in case someone would call me for work I would still go to make sure that we sustain the family*". **LF9, 36 years married woman with 7 children, 13/6/2018**

The women interviewed experienced social and psychosocial challenges while caring for the unwanted pregnancies. Resentment from partners and lack of partner support; socially, financially and emotionally made it even harder for them to cope with unwanted pregnancies. As indicated from a study by Da Costa (1999) on social support during pregnancy, pregnancy constitutes a time of significant life change requiring major psychological adjustments, often

associated with anxiety and stress. A Lack of psychosocial and emotional support during pregnancy constituted a risk factor for these mother and their babies.

Peer support through sharing of information with people who have gone through similar experiences however made the experiences bearable for some of the participants. HIV positive individuals who reported sharing their experiences in the HIV clinics were able to discover that they were not alone and had people to discuss any fears and challenges with regarding their pregnancies. Many of the women who had experienced LARC failure feared having HIV positive babies and giving birth to deformed babies. Nonetheless, through experience sharing with their peers they were able to have correct information about pregnancy outcomes and had their fears allayed and encouraged to seek antenatal services for better pregnancy outcomes.

4.3.2 Support from the health workers

Women who failed on LARC were at a cross roads and they needed answers and help in making decisions regarding the pregnancies they were faced with. The study found out that the women had hope after being counseled by the health workers about the pregnancies. Despite the counseling, some continued to worry about the outcomes until they had given birth.

> *"The health workers were supportive and encouraged me to attend antenatal care visits so that my baby does not turn out positive".* **LF1 24 years, Married with 3 children HIV +ve mother, 4/6/2018**

That is the only reason why I kept going for antenatal care. They really were very keen and even kept telling me that they didn't want me to have an HIV positive baby. Six weeks after giving birth they tested the baby for the first time and I was told the baby is HIV negative. I also made sure I took my ARVs on time. **LF4, 23 years, married with 3 children. HIV positive, 6/6/2018**

It was worth noting that a number of the women were comforted by health providers who encouraged them to take care of themselves and the pregnancies they were carrying.

4.3.3 Implication of the pregnancy on the household finances

Participants reported that the unexpected pregnancies affected their household incomes since they were not planned. Most women reported being weak and not able to work due to the pregnancy. They were not able to work and contribute to the household incomes, which took a toll on their families.

...Because I wasn't ready for any other baby. As a family, we already had many children. I looked at the timing and my family size; even my small business collapsed. Things became difficult for us a family". **LF3 30 year, married with six children, HIV positive, 6/6/2018**

"At times we would have food without sauce because I had no money to buy it. I had stopped working." **LF7, 35 years, married with 6 children, HIV negative, 9/6/2018**

The study findings also revealed that women who were financially self-sustaining before the pregnancy when they could not do any work to earn a living because they were pregnant. This resulted into depending on their spouses who also had less to offer.

"I wondered how I would take care of my unborn baby after giving birth since I didn't have anything at that time. When the pregnancy grew, I couldn't do any more work to earn money like before. I was always in bed and depending on my husband who was also not earning much". **LF1, 24 years, married with 3 children and HIV Positive, 4/6/2018**

"I didn't have enough money to take care of me, I had a lot of plans and needs at that time so getting pregnant was the worst mistake". **LF2, 24 years, married with 4 children and HIV positive, 5/6/2018**

Family planning methods are supposed to enable individuals and couples to plan, prevent and overcome economic challenges are having affordable families, but in this case, with unplanned pregnancies even the basic needs such as food were not enough and women who have unplanned pregnancies and their families. The men still leave the women to fend for the families even when the women are less productive.

4.4 Using contraception after experiencing LARC failure.

The benefits of using contraceptives outweigh the negative outcomes associated with contraceptive use. Despite being disappointed by LARCs, some of the women interviewed continued to use contraceptives. Some still opted for LARCs while others opted for other methods. This illustrated the importance they attach to family planning and how they have possibly their perceptions of the benefits of family planning. The reality of implant failure while using hormonal contraceptives creates a dilemma for HIV positive individuals on treatment. Drug interactions between the Anti-retroviral drugs and hormonal contraceptives

limit their contraceptive choices. Understanding their contraceptive choices after the LARC had failed was important to understand their perceptions of LARC failure, their intentions to control their fertility and choices of method of contraception following their experiences.

4.4.1 Attitude toward using contraceptives following LARC failure

Following failure of the methods they had been using, some of the participants gave up on contraception all together, some opted for other methods while some still opted for LARCs. The participant mentioned that family planning is still important and they still needed to use it.

> *"I had to use a family planning method. I decided to go for a permanent method. I cannot imagine having another baby and the health workers told me that the permanent methods are more effective than the LARCs especially for people like me*". **LF5, 24 years, married with 4 children and HIV Positive, 7/6/2018**

> *"I had no option but to continue using family planning since I did not want any more children. I just have to take the risks and hope that it doesn't disappoint me again"*. **LF4, 23 years, married with 3 children. HIV positive, 6/6/2018**

> *... "I gave on family planning. First the injectable disappointed me, then the implant too. Let me produce until I stop naturally*". **LF1 24 years, HIV positive, 4/6/2018**

Notably, the study revealed that LARC failure pitted some of the participants against contraceptives after their experiences and caused them to abandon family planning methods all together. Discontinuing family planning method negates all the benefits they would have

enjoyed if the method had not failed. Discontinuation of the contraceptive use completely can result in more mistimed pregnancies. Discontinuation while still in need or discontinuation due to contraceptive failure is of particular concern when it leaves women at risk of or with an unwanted pregnancy. This is in agreement with Staveteig (2017).

4.4.2 Contraceptive method adopted subsequent to LARC failure

In regard to the method of choice after experiencing the LARC failure, some opted for short term methods and others permanent methods that they believed would be more effective.

> *"…The IUD. I was told that it's non-hormonal, safer and lasts for a long time. I was told that the ARVs can easily over power the implants, pills and injectable but not the IUD. I will definitely use the IUD but not the implant; I won't ever use it again".* **LF2, 24 years, married with 4 children and HIV positive, 5/6/2018**

"Since I had used almost all the others, I decided to opt for the IUD and see how my body reacts to it. The fact is I had used other methods and they had disappointed me but even then I must use some family planning method if I don't want to give birth again; I have no option. **LF3 30 years, married with 6 children and HIV Positive, 6/6/2018**

"Honestly I couldn't use the implant again". **LF3 30 year, married with six children, HIV +positive, 6/6/2018**

Many of the women did not necessarily give up on LARCs. Given the limit range of available contraceptives, some of them still opted for the LARCs, but after weighing the options. Those who could not risk using the LARCs again chose other methods.

4.4.3 What influenced choice of family planning method after LARC failure

Participants who chose to continue using a long acting reversible contraceptive method reported having no other choice. The fear of side effects from other methods was one of the factors that influenced their choice of LARCs.

> *After my baby made a month I came and got some injectable but my body reacted to them and so I returned to the implant of 3years*. I didn't see what other method would work best for me." **LF5, 24 years, married with 4 children and HIV Positive, 7/6/2018**

Some of the participants reported having been informed by the health workers that they can still use the LARCs but discontinue them after half their usual recommended period.

> *They told me that the ARVs we take daily over power the LARC and they advised me to remove it earlier than the expected date so I will come and remove it at two years.* **LF1 24 years, Married with 3 children HIV +ve mother, 4/6/2018**

This was so puzzling as to what the basis for this recommendation by health workers was. There is no evidence supporting the recommendation by the health workers to the HIV positive women to have hormonal implants removed after 2 years. This may worsen the problem by encouraging the HIV positive women to take up the hormonal implants, which end up failing

based on information that lacks evidence. Health providers need to have the most current evidence based information, which they should use to counsel the clients appropriately.

The fear for the permanent methods also contributed to the women continuing to use LARC. Women feared the permanent method since they never wanted to have the simple operation carried out on them.

> *I tried using the injectable and oral contraceptives before and I got bad side effects. I fear tubal ligation because it's painful and I was told that the IUD can also come out and you conceive. So I decided to give the implant another try*. **LF9, 36 years , HIV positive, married with 7 children, 13/6/2018**

> *"I feared it (tubal ligation) so I decided to try the IUD. It is long lasting and the health worker told me that it is has no hormones which can be overpowered by the implants".* **LF2, 24 years, married with 4 children and HIV positive, 5/6/2018**

The fear to use other methods, limited range of available FP methods and side effects of some methods were sighted as the main reasons for their contraceptive choices after LARC failure. These are some of the issues that need to be addressed by providers as they promote different family planning methods.

4.4.4 LARC method they would recommend to a friend

Women were skeptical to recommend any method to their friends despite acknowledging that family planning has a lot of benefits. Some recommended the methods they were using at the

time while others reported that they would encourage their friends to acquire advice from the health workers

> *"You have to keep trying each of them in case one fails until when you get the suitable one".* **LF1 24 years, Married with 3 children HIV positive mother, 4/6/2018**

> *"I would recommend the IUD to someone who is on ART. But other people can use any as long as their bodies can handle it*". **LF2, 24 years, married with 4 children and HIV positive, 5/6/2018**

> *"Uhm; things to do with family planning methods are hard to predict. I would recommend either pills or injectable".* **LF3 30 year, married with six children, HIV positive, 6/6/2018**

Some of the participants however said that they can never recommend LARCs to anyone, let alone family planning. These individuals reportedly abandoned family planning following their experiences with LARC failure. Some of these mentioned that they had even told some of their friends never to use family planning out of anger and frustration.

> *"I can never advise anyone to use a family planning method". In fact I told all my friends in our SACCO that when they started making fun of me for being pregnant"* **LF 9, 36 year HIV negative, 13/6/2018**

> *"… I even took it upon myself to tell other women that those things do not work. Whenever I would go for antenatal care and they (health workers) start telling us about family planning, I would just laugh and tell my friends that those things don't work. I would show*

them the scar where the implant was and most of them feared LARCs". **LF4 23 years HIV positive, 6/6/2018**

From the verbatim, long acting contraceptive failure also leads to fueling of myths and misconceptions about LARC in communities especially if comprehensive information was not given to the user before taking up the method. From the verbatim above, it was noted that the victims may sometimes discourage others from taking up the LARCs out of anger and disappointment suffered there by de-campaigning use of LARCs and causing those who would have benefited from LARCs to lose out.

Findings from this study revealed different varied experiences of the women who conceived while using LARCs. The descriptions of the participant's experiences and how they dealt with the discomfort and negative experiences from unplanned pregnancies relates largely to the information they received prior to taking up the LARCs.

5 DISCUSSION

5.1 Introduction

Women's responses when faced with unwanted pregnancy failure are varied and the issues that influence these responses are complex. This study investigated women's experiences when faced with unwanted pregnancies resulting from LARC failure. It highlights possible explanations to women's coping practices with unplanned pregnancies resulting from LARC failure. The study focused on how the women coped with the unplanned pregnancy regardless of the outcome.

5.2 Main discussion

It is not surprising that women who experience LARC failure typically express emotions of shock and surprise because the pregnancies are totally unexpected having not received information about the LARC effectiveness prior to taking up the methods. Potential LARC users wrongly choose LARC with the perception that they are 100% which is not the case. Counselling is supposed to clarify the potential users' perceptions about the LARC's effectiveness and gives the health worker an opportunity to assess the client's medical eligibility to use the chosen methods. Ideally, women should choose family planning methods based on informed choice, having been provided with comprehensive information on all available methods including effectiveness, to enable them achieve their fertility intentions.

LARCs are known to be ineffective if the women using them are also on ART. However, health workers went ahead to provide hormonal implants to women on ART without informing

them of the drug interactions. One wonders why the health workers did not provide this information to the HIV positive women. This deliberately puts these women in a difficult place when they eventually conceive. There are other non-hormonal contraceptives that can be offered to women who are HIV positive and it is the role of the health worker to have the latest information about the methods and to provide this information to the clients. The HIV positive women need to know prior to adopting any family planning method that the ARVs weaken the hormonal contraceptives and increases the chance of the methods failing so that they can opt for other more effective methods. If they still choose the hormonal LARCs, they need to do so having understood this.

Study findings underscore the need for quality and comprehensive family planning counselling in helping the women cope with LARC failure when it happens. By giving women comprehensive information prior to taking up the methods, the women decide whether or not they are willing to accept the risk of failure associated with LARC before taking it up. Subsequently, when the LARC they took up knowingly fails, they will not be so surprised and are more likely to cope with the pregnancy. Post failure counselling for victims of LARC failure by ensuring that they understand what could have caused the failure is also a possible effective strategy to help these women cope with unplanned pregnancy.

Also important to note is the effect of ensuring client's privacy and confidentiality during service provision. The family planning clients are more likely to freely discuss contraceptive choices with the provider if they are assured of privacy and confidentiality during education and counselling, hence informed choice. This highlights the need to analyse the existing gaps in provision of family planning information and services including system challenges like adequate space that guarantee client's privacy and address them. Family planning programs

and policies need to enlarge women's access to quality contraceptive information with assured privacy and confidentiality to ensure client's rights to freely make informed contraceptive choices

Experiences with unwanted pregnancies are worsened by the realities of the relationships and social economic status of the women, which exposed them and their unborn babies to risks like unsafe abortion, poor or ill health, hardship, neglect, abandonment, and marital problems. Women are likely to experience psychological distress due to the pregnancies and may receive less support for the unplanned pregnancy. Those who carry unintended pregnancies to term are less likely to seek antenatal care if they do not quickly come to terms with the pregnancies and the unintended pregnancy may result in lone motherhood or termination of the pregnancy. The mental wellbeing of women needs to be assessed during post failure counselling and appropriate support given.

Spousal support for contraception choices and spousal involvement in discussions about family planning is important in correct and continued use of LARCs thereby preventing avoidable LARC failure. As with Khan et al (2008) and Guttmacher (2013) LARCs are more effective among women who involve their husbands in choosing the family planning methods because it enhances informed decision making and adherence to recommended practices while using LARCs. For instance, in regards to when to initiate intercourse after insertion of the contraceptive implant and follow up visits to the health. This is also more likely to also translate into spousal moral and material support if LARC failure occurs

Despite LARC failure and the resulting consequences of unwanted pregnancies to the women, they keep using the LARCs or opt for another method. This shows that the perceived benefits of the LARCs outweigh the risk of failure. LARCs are considered highly effective and convenient methods, which explains why women still opt for them even when they know that they are not 100% effective. The failure rate for the hormonal contraceptives however is higher among the HIV positive individuals on ART, which poses a dilemma for those whose choice and preference would have been hormonal implants. The implants are also usually more commonly available of the LARCs than the IUD because IUD insertion is more technical and requires more time especially in an environment where providers feel over-burdened and under-supplied. Family planning programs need to increase access to IUDs and permanent methods for HIV positive individuals instead of leaving them with "no choice" but to use implants that end up failing

6 CONCLUSION

Women who conceive while using LARCs experience emotional, psychological and financial challenges, which do not only stop during pregnancy, but continue even after delivering the child. Counselling all individuals before they take up LARCs and any other family planning methods and providing them with information on effectiveness of LARCs is key in helping them choose appropriate methods or help them cope with unwanted pregnancies if they still go ahead to choose the method. Family planning methods should be offered to individuals who have fully received and understood information on a range of available contraceptive methods, method contraindications, method advantages and disadvantages, how to use selected method, insertion procedure, potential side effects, potential failure and continuing care.

In the era of HIV endemicity, family planning is key in preventing mother to child transmission and counselling clients on effective contraceptives and screening for medical eligibility in the context of HIV and HIV treatment should be emphasized by family planning programs. Family planning providers need to ensure privacy and confidentiality for all clients to enable them freely discuss their contraceptive choices.

7 RECOMMENDATIONS

7.1 To family planning service providers

- Providers of LARC should offer the most appropriate method for individuals after taking a full history and assessing women for the most appropriate methods.
- Provide individualised post failure counselling to women who experience LARC failure to help them cope with the unwanted pregnancy and clarify any fears, myths and misconceptions which they may have about the pregnancy resulting from LARC failure
- Encourage couples to make family planning choices together for improved LARC effectiveness and partner support in the event that LARC fails

7.2 Future research

- Further research is needed to further identify and understand the key underlying reasons as to why health workers still give hormonal contraceptives to HIV positive individuals despite the known drug interactions
- There is need to also identify the key gaps and challenges faced by health workers in counselling family planning clients comprehensively for informed choice.

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8 APPENDICES

8.1 APPENDIX I: STUDY INFORMATION SHEET FOR PARTICIPANTS.

Title of proposed study: Experiences of women who conceived while using long acting reversible contraception in kabale district

Researcher: Nsasiirwe Sheillah, a master's student at Uganda martyrs' university Nkozi.

Course: Masters in Public Health – Population and reproductive health

Academic supervisor; Vivienne Laing

1.0 Introduction: This study is being conducted in partial fulfilment of the requirements of Master's Degree in Public Health-Population and Reproductive Health at Uganda Martyrs University Nkozi. You are therefore being requested to take part in this study.

2.0 Purpose of the study: The purpose of this study is to describe the experiences of women who conceived while using long acting reversible contraceptives. This research seeks to find out how these women coped with the resulting unwanted pregnancies.

3.0 What will be done when you accept to participate in the study: In case you have agreed to take part in this study, a face-to face interviews will be conducted at a mutually convenient place. With your consent I will go ahead to ask you some questions related to the topic. If you allow me, I will be using an audio recorder to be able to capture our discussion without missing out vital information.

4.0 Benefits: There are no direct benefits for you from this study. The information gathered from this research will be used by health care workers and the Government of Uganda to generate strategies for improving family planning services in Uganda.

5.0 Risks/Discomforts: You may experience psychological discomfort as you try to remember some distressing experiences that you went through.

6.0 Confidentiality: All interviews will be recorded and the audio recorder will be kept in a closed place with restricted access. Audio recordings will be deleted at the end of the study and your identifiers will not appear on any reports.

7.0 Voluntariness: you are free to participate or not to. You are also free to withdrawal from the interview at any point if you wish to. If during the interview you remember something distressing, the interview will be stopped and can only be resumed when you are ready to start.

8.0 Consent

You are requested to read the consent form provided that gives you information about the research and allow us to proceed with the interview by signing on the consent form.

If you have questions/ queries about this study any time after this interview, please contact:

Dr. Nsasiirwe Sheillah on: +256782513257

Researcher

8.2 APPENDIX II: CONSENT FORM FOR STUDY PARTICIPANTS

Good morning /afternoon. My name is ....., a student with Uganda Martyrs University pursuing a Master's degree in Public health- population and Reproductive health. I am conducting research on experiences of women who conceived while using long acting reversible contraceptives (IUD and implant).

You have been selected to participant in this research because of your experience of conceiving while using a LARC. I will appreciate your participation in this research. The information will help family planning providers in the district and nationally in promoting quality family planning services.

Whatever information you provide me with will be kept confidential and will not be shared with any other person. Participation in this research is voluntary and you can choose not to answer any individual question or all the questions. However, I do hope that you will participate in this interview since your views are very important

Do you have any questions for me at this point?

Do you agree that to participate in this research?

Accepted ……1

Refuse ……2 (End here, and thank the respondent)

Signature of the respondent ……. Date ……...

Interviewer's Name……...

Signature ……...…… Date ……...

Women's responses when faced with unwanted pregnancy failure are varied and the issues that influence these responses are complex. This study investigated women's experiences when faced with unwanted pregnancies resulting from LARC failure. It highlights possible explanations to women's coping practices with unplanned pregnancies resulting from LARC failure. The study focused on how the women coped with the unplanned pregnancy regardless of the outcome.

8.3 APPENDIX III: INTERVIEW GUIDE FOR WOMEN WHO CONCEIVED WHILE USING LARC

Demographics	Age Marital status Number of children HIV status If HIV positive: Are you on anti-retroviral treatment?
Introduction	What LARC method were you using? For how long had you used the method before you conceived? Probe: -I would like to hear more about….
To understand how these women coped with the	Tell me how you felt when you conceived while using LARC?

unwanted pregnancies after the LARC failure.	What did you do when you knew that you were pregnant? How did you cope with the resulting pregnancy? Probes: - And what happened thereafter… And then……. Uhmm... Please tell me more about….
To understand the socio-economic and health challenges faced by these women after LARC failure.	How did this experience affect you socially as an individual and your relations? (probe for the husband reaction, other family member's reaction) How did it affect you economically? (probe how this affected your work, business, expenditures (planned and unplanned} Probe: -I would like to hear more about…. -And then… - I see…
To determine the experiences of these women using contraception after experiencing LARC failure.	How did you feel about using a family planning method after going through that experience? Tell me what it is/was like using contraception again? Probe: -Did you say…. -And then what happened…

Conclusion	Let’s summarize some of the key points from our discussion. Is there anything else? Do you have any questions? Thank you for participating.

8.4 APPENDIX IV: INTRODUCTION LETTER

Uganda
Martyrs
University

Making a difference

Faculty of Health Sciences
Email: health@umu.ac.ug
24th May, 2018

The Responsible Officer

RE: INTRODUCING NSASIIRWE SHEILLAH

This is to introduce to you **Ms. NSASIIRWE SHEILLAH Reg. No. 2015-M272-20052** who is a postgraduate student in the Faculty of Health Sciences at Uganda Martyrs University. She is pursuing a programme leading to the award of Master of Public Health- Population and Reproductive Health. She is currently on research for her dissertation on the topic:

"EXPERIENCES OF WOMEN WHO CONCEIVED WHILE USING LONG ACTING REVERSIBLE CONTRACEPTIVES"

The topic and protocol have been approved by the relevant university authorities.

Any assistance rendered to her in this respect will be highly appreciated by the university.

Yours sincerely,

Dr. Miisa Nanyingi
Ag. Dean,
Faculty of Health Sciences,
Uganda Martyrs University

8.5 APPENDIX V: EXPENDITURE

S/NO	Item	Quantity	Unit Cost	Total Cost
1	Stationary	3 Reams	15,000	45,000
2	Photocopying	20 Copies	5,000	100,000
3	Printing	5 Copies	5,000	25,000
4	Voice recorder	1 Pc	100000	100000
5	Flash Disk	1 pc	50,000	50,000
6	Data collection; transport and perdiem			500,000
7	Airtime			100,000
8	Final Report Binding	5	20,000	100,000
9	Miscellaneous			200,000
	TOTAL			1,220,000

8.6 APPENDIX VI: List of charts

Chart 1: ***Showing age categories of participants***

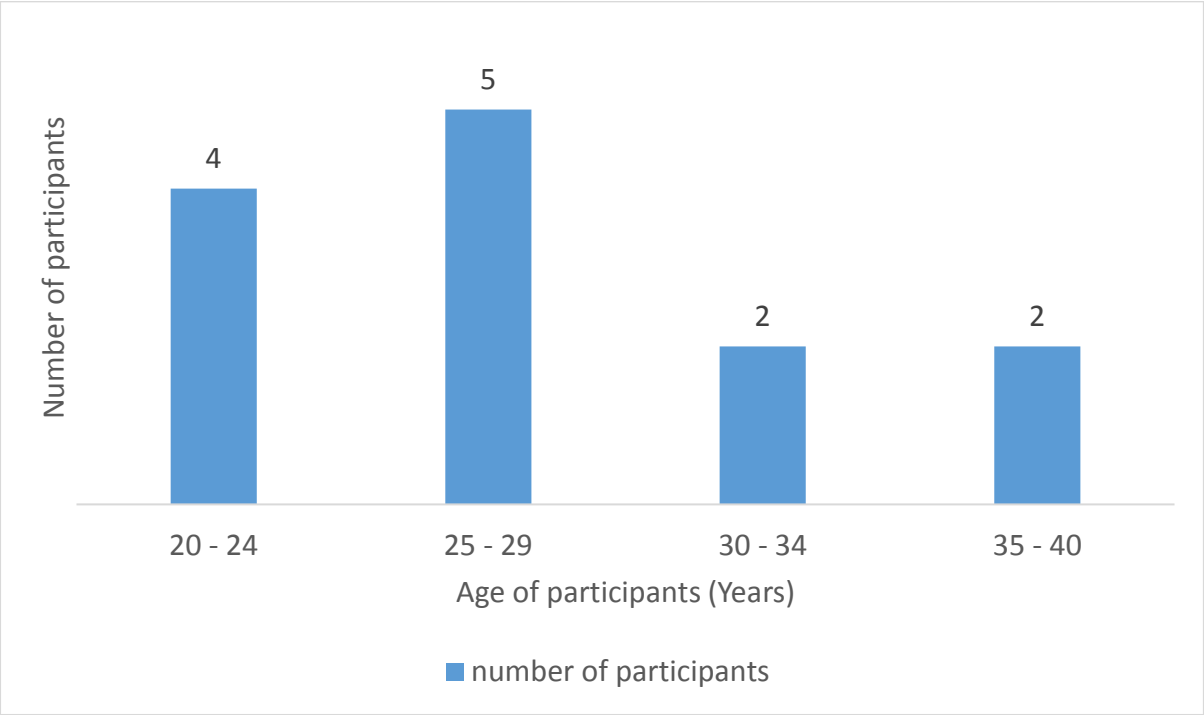

Chart 2: ***showing Marital and HIV status of participants***

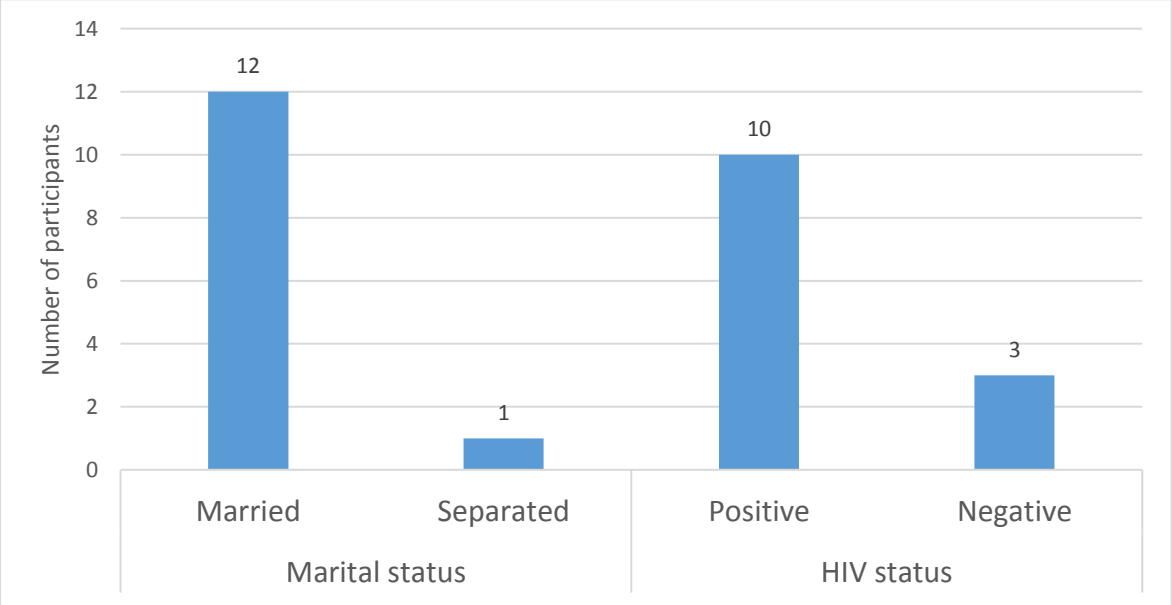

Chart 3: ***Showing number of children per participant***

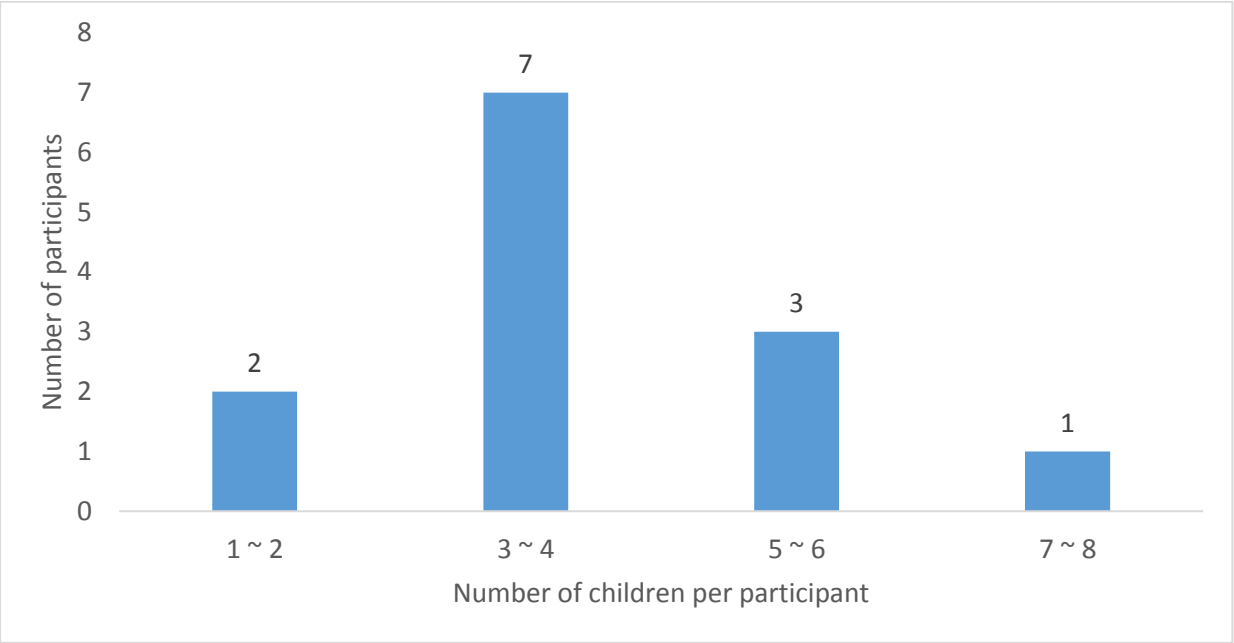

Chart 4: ***Showing duration of LARC use before failure among the respondents***

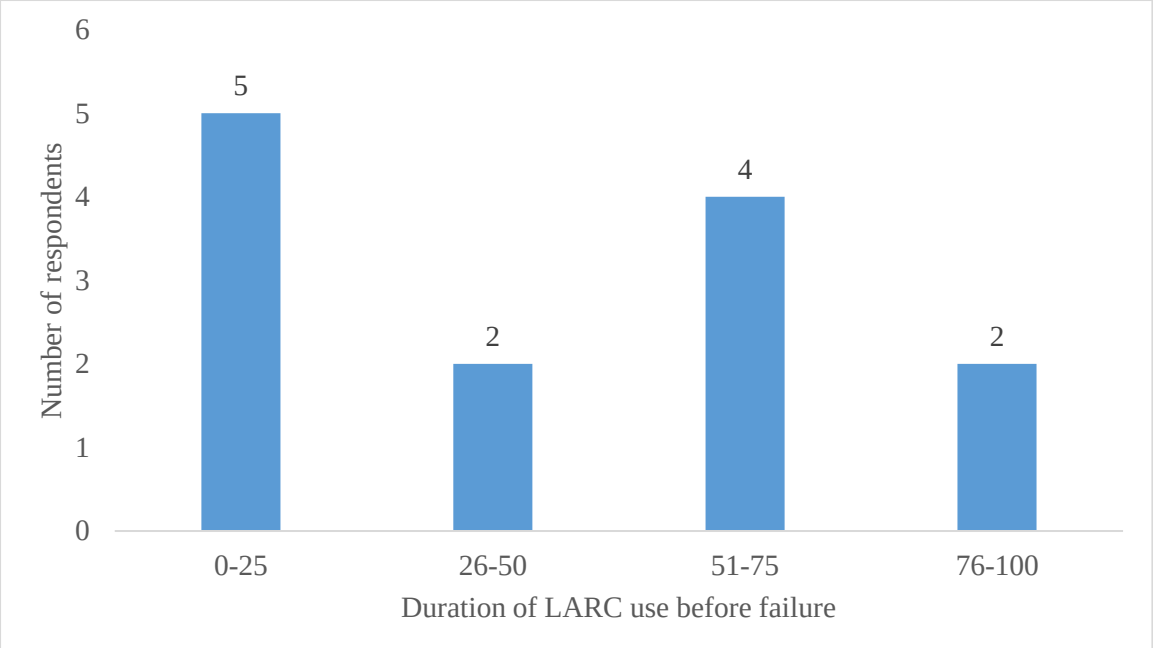

Chart 5: ***Showing period of LARC use before conceiving Vs expected years of effectiveness per participant***

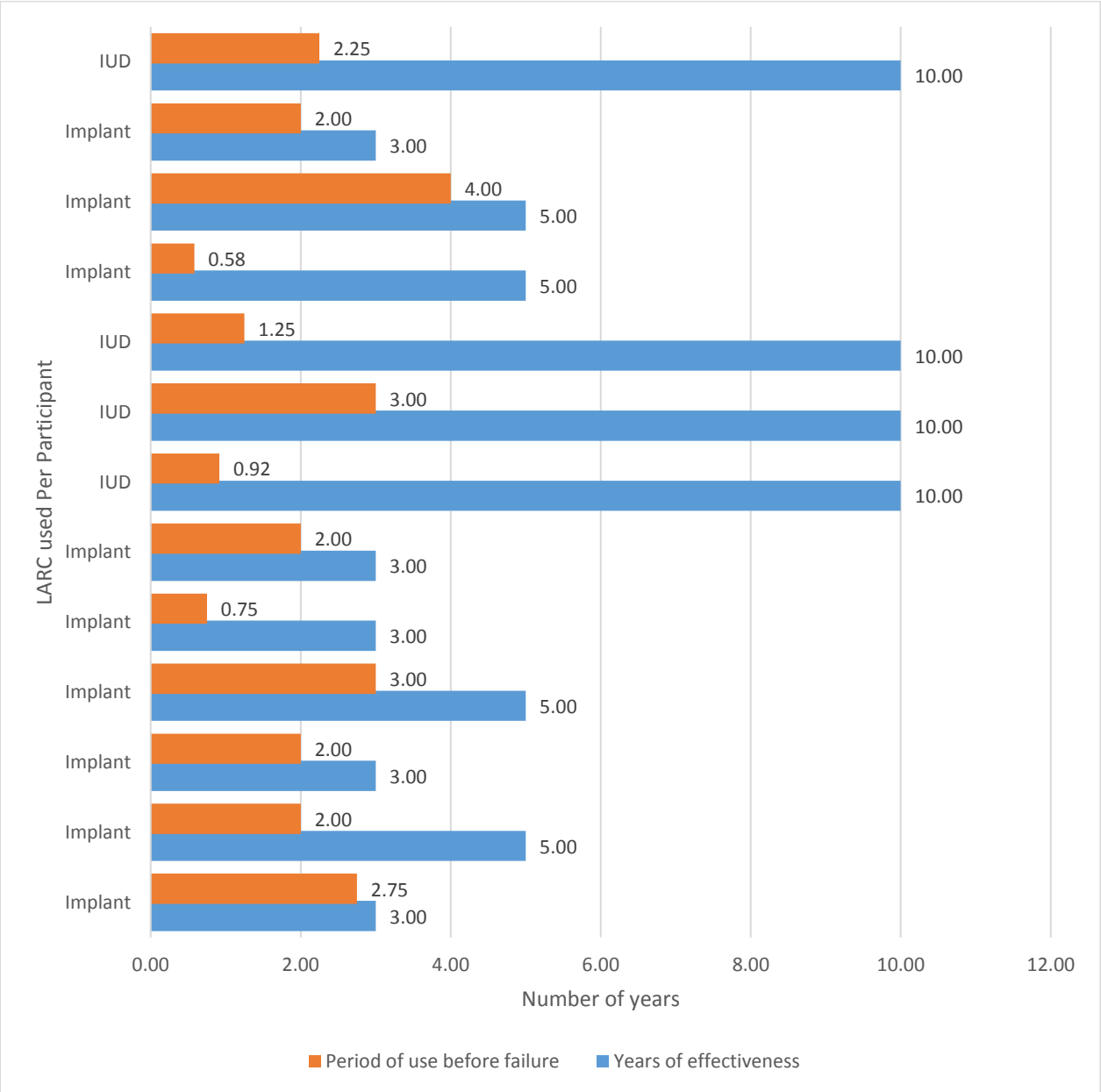

Chart 4: ***Showing employment status of the respondents***