

# ASSESSMENT OF FACTORS AFFECTING UTILIZATION OF LONG ACTING REVERSIBLE CONTRACEPTIVES IN HURUMA SUB-COUNTY HOSPITAL, UASIN GISHU COUNTY, KENYA

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Low levels of use and high unmet need for Long Acting Reversible Contraceptives (LARCs) have led to high levels of unintended pregnancy. The purpose of this study was to assess factors affecting utilization of LARCs in Huruma Sub-County Hospital, Uasin Gishu County, Kenya. The study research objectives were: determine the socio-demographic factors; reproductive factors; the health facility factors affecting the utilization of LARCs and ascertain perception of women on utilization of LARCs. The study adopted a descriptive research design. 4 nurses were purposively selected while convenient sampling technique was used to select 139 women within the reproductive age bracket. Data was collected through questionnaires and interview guides. Data for this research was analyzed qualitative and quantitative analysis. Tables and figures were used to represent the outcomes. The study findings indicated that socio-demographic factors had no influence on the utilization of LARCs. The study concluded perception influenced utilization of LARCs. Reproductive history did not affect utilization of LARCs. Health facility offered varied methods of LARCs and did not influence utilization of LARCs. The study recommended that education and campaigns should be conducted on family planning methods to create awareness on the importance of using LARCs to reduce the negative perception towards use of LARCs.

**Keywords:** Socio-demographic factors, utilization, long acting reversible contraceptives, reproductive factors, health facility factors, perception of women

## Introduction

Family planning is beneficial through the prevention of unintended pregnancy, and promoting maternal and child health (White & Speizer, 2007). Effective and efficient contraceptive technique allows women to postpone motherhood, space and limit births, and avoid unintended pregnancies and abortions. By achieving these it could prevent as many as one in every three maternal deaths (Smith Ashford, Gibble, & Clifton, 2009). About 13% of all maternal deaths worldwide are attributed to unsafe abortions. This makes unplanned and unwanted pregnancies a serious public health problem (Mwaliko, 2009). Family planning, in particular Long Acting Reversible Contraceptives (LARCs), may perhaps prevent many of these deaths by allowing females of reproductive age to bear children during the time when it is safest for themselves and their babies (Loha, Assefa, Jira, & Tessema, 2003).

It is approximated that 30% of all pregnancies worldwide are unplanned, half of these unplanned pregnancies result from contraceptive failure, due to incorrect or inconsistent use of contraception and the other half are due to nonuse. LARC methods may have a wider role in contraception and their increased uptake

could help to reduce unintended pregnancy (NICE, 2014). The use of Long Acting Reversible Contraceptive (LARCs) has been suggested to be able to solve this problem (Frost, Darroch, & Remez, 2008).

According to Finer and Zolna (2014), unplanned pregnancy in the United States is significantly higher than in other developed countries. It stands to be a major problem. 50% of all pregnancies per year in USA are unintended. These pregnancies result in 1.2 million abortions per year, have negative consequences on health of women's and newborns, and incur a financial burden on self, family and society (Ventura, Abma, Mosher, & Henshaw, 2009). The National Survey of Family Growth estimates that the occurrence of unintended pregnancy among consumers of oral contraceptive pills is 9% compared with 0.001% of sub dermal implant, and 0.14% of IUCD (Winner, et al., 2012).

These unsafe abortions result in about 2,600 deaths of women annually in Kenya and more than 21,000 women are hospitalized as a result of incomplete abortions and other abortion related complications. Unsafe abortion is estimated to account for 35 percent of maternal deaths in the country, a figure that is much higher than the global average of 13



percent. Limited access to family planning information and utilization of effective contraceptives (Center for Reproductive Rights, 2010).

In Uasin Gishu, in 2007, of the 250 maternal deaths (per 100,000), 184 were due to abortion related complications (Mwaliko, 2009). The usage of LARC in the region in 2015 is well documented indicating that there is a higher utilization of short acting contraceptives compared to the LARC from sampled contraceptives. The number of women who used pills were 12381 women, 75810 women used injection; 2558 women used IUCD insertion while 6692 women used implant (Health Statistics Office, Uasin Gishu County, 2016).

The effectiveness of short acting contraceptives (pills and condoms) depends on their correct and consistent use, because of this; they increase the risk of unintended pregnancy (Frost & Darroch, 2008). By contrast, LARC methods do not depend on daily compliance (NICE, 2014). Study conducted in Uasin Gishu County on maternal health care, the uptake of family planning methods from clinics is about 27%; among these, those that use LARC were 17% while 83% use short term contraceptives. These findings depicted that majority of females using the contraceptive do not go for the LARCs (Kiprotich, 2014).

Long-acting reversible contraceptives (LARC) are a family planning method which provides contraception for an extended period of time. In addition, they require little effort on user compliance thus having a failure rate of less than 1% per year, which is about the same as 'perfect use' (Stoddard, McNicholas & Peipert 2011). Examples of LARCs include: intra-uterine copper device (IUCD) and sub dermal implants. Harmovich (2009) adds that, LARCs, come close to being 100% effective, readily reversible with swift return of fertility, and require no effort on user compliance. Despite the record of efficacy, safety, and cost friendliness, LARC worldwide are underutilized with only 15.5% of women worldwide using intrauterine devices, and only 3.4% using sub dermal implants (Blumenthal, Voedisch, & Gemzell-Danielsson, 2011)

Despite proposed benefits of LARC, there still remains few statistical information to back the effectiveness of the method and the various factors affecting its utilization. This study aims to shed light on the assessment of factors affecting utilization of long acting reversible contraceptives in Huruma Sub-County Hospital, Uasin Gishu County, Kenya

Ideally, family planning is in place to control challeng-

es such as unwanted pregnancies and abortions. Options given for family planning including the use of LARC are meant to help women choose the most favorable mode of family planning to adopt with the benefits of each and challenges associated with each well narrated. Consequently, LARC uptake ought to be higher owing to its benefits to most women.

The uptake of family planning methods in Uasin Gishu County is about 27% among these; those that use LARC were 17% while 83% use short term contraceptives (Kiprotich, 2014). Specifically, Huruma sub-county hospital faces the same challenge where the uptake of LARC is only at 10% compared to the short acting contraceptive uptake at 90% for 2014 and 2015 (Family Planning Office, Huruma Sub-County Hospital, 2016). These findings depicted that majority of females using the contraceptive do not go for the LARCs despite the proposed benefits. Past Literature also indicates that studies have been carried on LARCs but have been conducted outside Kenya and have mainly concentrated on married women, omitting all the other women in the reproductive age bracket therefore bringing out the gap that needs to be filled.

The study was carried out among women of reproductive age married including married and unmarried attending Huruma Sub- County hospital in Uasin Gishu County, in Kenya. This therefore warranted the need for further research to help fill these gaps hence the need to conduct this study on the assessment of factors affecting utilization of long acting reversible contraceptives in Huruma Sub-County Hospital, Uasin Gishu County, Kenya. The study was guided by the following objectives which were to: determine the socio-demographic factors; ascertain the perception of women on utilization of long acting reversible contraceptives; establish the reproductive factors and the health facility factors affecting the utilization of long acting reversible contraceptives.

A number of studies conducted on LARC. For example, according to a study by Varney and Guest (2004) the use of long-acting reversible contraceptives has been proved to reduce the number of unwanted pregnancies and the reduction of the fertility rate in the developed nations such as Spain. According to a study by Boonstra, (2013) adolescent pregnancies have declined dramatically in the United States since their peak in the early 1990s, and in 2008, the pregnancy rate reached its lowest level in nearly 40 years. That year, the pregnancy rate

was 68 per 1,000 women aged 15–19, representing a 42% decline since 1990. The long-term decline in teen pregnancy has been driven primarily by improved use of LARCs. A key strategy in reducing teen pregnancy has been increasing awareness, access, and availability of long-acting reversible contraception (LARC), specifically intrauterine devices (IUDs) and implants. A CDC (2011) report on contraceptives methods available to patients indicated that upward trend of LARC use is the accompanying downward slope of unwanted pregnancies in the US and 13% decline in abortions between 2008 and 2011. LARC methods have a wide role in contraception and their increased uptake could help to reduce unintended pregnancy (NICE, 2014). Approximately 40% of pregnancies in Kenya are unplanned and 14% of all pregnancies results to abortion. These unsafe abortions result in about 2,600 deaths of women annually in Kenya (Center for Reproductive Rights, 2010). The high number of unplanned pregnancies results mainly from unmet needs for contraceptives.

These findings show that there are still significant barriers to access and use of effective contraceptive methods in Kenya. Interventions to increase access to effective contraceptive services among women in Kenya in order to reduce unintended pregnancies are therefore needed (Kenya National Bureau of Statistics, 2010). Huruma area is taken as it possesses this similar challenge in the case of unmet needs for contraceptives.

The area uptake of LARC is too low where majority of the females do not use LARC despite its proposed benefits. There is therefore need to assess factors affecting utilization of long acting reversible contraceptives among women of reproductive age (15-49 years) in the country. This was done in Huruma Sub-County hospital in Kenya as the area of study.

### Research Methodology

The study adopted a descriptive research design. Descriptive research design is more appropriate because the study seeks to build a profile about the factors affect utilization of long acting reversible contraceptives among women of reproductive age (15-49 years) at Huruma Sub-County Hospital in Kenya

The population of interest in the study consisted of the nurses at Huruma Sub- County Hospital and women within the reproductive age coming for family planning services at the hospital. The study focused on all the 4 nurses at the family planning unit and 218 women of reproductive age, which is the average number of women attending family planning unit in two weeks. This is an average taken from last 6 months' record. The study therefore targeted a total of 222 respondents as shown on table 1.

Table 1

#### Target Population

Target Group	Target Population
Nurses	4
Women within reproductive age	218
<b>Total</b>	<b>222</b>



The sample size of the women of reproductive age study was calculated using the formula below as recommended by fisher et al., (2003):

$$nf = \frac{n}{1 + \frac{n}{N}}$$

Where;

nf = Sample size (when the population is less than 10,000).

n = Sample size (when the population is equal to 10,000); 384.

N = Estimate of the population size; 218

Table 2

### Sample Frame of the Respondents

Category	Target Population	Sample Frame	Sampling Procedures
Nurses	4	4	Purposive sampling
Women within reproductive age	218	139	Convinient Sampling
<b>Total</b>	<b>222</b>	<b>143</b>	

The study employed purposive sampling to select the nurses that took part in the study while convenient sampling was used to select the women within the reproductive age that took part in the study. Purposive sampling was considered a suitable technique since the four nurses in family planning clinic were considered the key informant and since the sample size was small; all the four nurses were selected. Convenient sampling technique on the other hand was used to select women of reproductive age. This technique was suitable because it involved selecting respondents as they become available to the researcher.

**Inclusion.** The study included all the women within the reproductive age bracket visiting Huruma Sub- County Hospital family planning clinic, both old and new users of Short and Long Acting Contraceptives. The researcher also only included the respondents that voluntarily agreed to take part in the study within this bracket.

**Exclusion.** The study excluded all the respondents that were visiting the clinic aged below 18 years without parental consent since they were considered mi-

### Sample Size of the Respondents

$$nf = \frac{384}{1 + \frac{384}{218}}$$

The desired sample size of the women of reproductive age thus comprised of 139 plus the 4 nurses ensured that sample size of 143 respondents was employed.

nors. The study also excluded any other respondents that did not consent to take part in the study since the selection was based on voluntary consent by the respondents.

### Research Instruments

The instrument for data collection was semi-structured questionnaire and structured interview guide. The questionnaires had both open and closed ended questions. The questionnaires were developed as per the objectives of the study. Questionnaires were administered by the researcher and the research assistant to the selected respondents who were readily available, and willing to participate on the study since some of the respondents were in a hurry to leave the clinic or it was their turn to see the service provider. Once the questionnaire was filled the researcher proceeded to the next respondent until all the responses from all respondents were captured.

An interview guide was also used for the purpose of collecting primary data. The interview

schedule was administered to the nurses at the hospital family planning clinic. The questions sought in-depth information on the topic of the study since they were at a very good position to answer the questions of the study and provide the information needed. In order to ascertain content and face validity, the questionnaire was presented to the supervisors and examiners in the university for scrutiny and advice.

### Statistical Treatment of the Data

Data for this research was both qualitative and quantitative. Qualitative data analysis involved explanation of information obtained from the interview schedules and existing literature through thematic analysis. Quantitative analysis was done for the numerical data obtained from the questionnaires. This was done using descriptive and inferential statistics with the help of Statistical Package for Social Sciences (SPSS) version 16. Chi-Square was used as inferential statistics. The responses in the questionnaire were coded into common themes to facilitate analysis. The coded data were then entered into SPSS program to generate frequencies and percentages. Tables, bar graphs, pie charts and percentages were used to represent the outcomes.

### Ethical Considerations

To ensure that the study complied with the

ethical requirements pertaining to research, consent was developed indicating a full disclosure of all the activities of the study and the study intention. The respondents were given a consent form which they indicated their voluntarily participation in the study. It was only after the respondent had consented that they were allowed to take part in the study and no coercion of any kind was used. The respondents were also allowed to withdraw from the study whenever they wanted to.

In respect for the informants and in order to protect them from physical, mental and emotional harm resulting from the data they gave, the researcher ensured that inquiry into personal matters was avoided without consent from the participant involved. High level of confidentiality and privacy was observed. For confidentiality, the anonymity of the respondents was maintained and safeguarded and not sought for and for privacy, the data acquired was used only for academic purposes and published only with the consent of the respondents. Data was presented in such a way that it does not link to individuals who gave it. The researcher also safeguarded the respondents from any form of research malpractices that could be a threat to them. Honesty during data collection and reporting was adhered. Study findings were reported exactly as obtained.

### Results

Table 3

Summary Findings on Socio-demographic Factors

Socio-demographic Factors	Chi Square results
Age	0.480
Marital status	0.286
Level of education	0.640
Religion	0.342
Culture	0.056
Husband support	0.495
Socialization	0.159

Study findings indicated that older women tend to use LARCs more compared to middle aged women. Study further indicated that age had no influence on utilization of LARCs. Marital status did not affect utilization of LARCs. The level of education had no influence on the utilization of LARCs. Religion and culture were

less likely to influence utilization of LARCs. Partners support had no influence on the use of LARCs. The study also indicated the socialization among women makes them use particular family planning methods since they exchange information among themselves, though there was no significant relation-



ship on the use of LARCs.

Majority of the respondents had heard of family planning methods. Majority of the respondents gave the definition of family planning as a way of prevent getting pregnant when not ready to raise the child. Majority obtained information on family planning from the health Centre or clinic. Majority knew pills, injection and condoms. Majority of women said they did not use LARCs because of its negative effects. The four nurses interviewed cited that low Utilization of LARCs was attributed to negative perception, myths and fear of side effects due to lack of information on the importance of LARCs.

Majority of those who had 3 and more children used LARCs compared to Women with less than 2 children. This could be attributed to the fact that older women have already established their families and are not interested in having more children and therefore would adapt a long lasting method of family planning while the younger women were still in the process of establishing their families and have a desire to have more children. The results further indicated that there was no relationship between plan to have more chil-

dren and utilization of LARC.

Health facility offered varied methods of LARC. The hospital was equipped with the different modes of LARC and therefore the women were at liberty to choose whichever method they preferred to use though some of the women of reproductive age cited that the health care providers determine the type of family planning to use by the user. The four nurses interviewed cited that LARC are not popularly used despite being accessible for use.

Reasons cited for non-use were myths on LARC side effects; cultural influence and fear of insertion procedure. The hospital does not provide specific family planning methods for certain clients. The service providers however informs the women of the different methods available and they are left to make their informed choice on the method they wished to use, therefore the study findings found that there was no special criteria based on whom to use LARC for nulliparous and adolescents. The respondents received counseling for LARCs as part of the family planning services, though majority of women noted that they did not receive counseling on LARCs.

Table 4

#### *Utilization of LARCs*

<b>Utilization of LARCs</b>	<b>Frequency</b>	<b>Percent</b>
<b>Not Used</b>	114	85.1
<b>Used</b>	20	14.9
<b>Total</b>	134	100

The study findings showed that majority of the women did not use LARCs. This is supported by the findings on the usage of LARCs in that as much as the nurses knew and taught women about LARCs; utilization was low (14.9%). From the four nurses interviewed said short acting methods of family planning is more popular than LARCs and the reasons cited were; that LARCs have more side effects, fear of insertion procedure, influence by social groups to use the methods, negative influence by their spouse towards LARCs, believe that LARCs cannot be used by younger women between 15-30 years, LARCs affects fertility, LARCs cannot be used by women who still desire to have more children.

Among none users of LARCs, most (42.1%) said LARCs causes bleeding, 28.1% gave no reason,

9.6% indicated loss of weight, 6.1% mentioned headache, 2.6% said that they would gain weight while 0.9% recorded that it would reduce breast feeding. From these findings on concerns on side effects of LARCs, reasons for not using LARCs, showed that majority of women did not use LARCs because of lack of information and negative perception on the importance of LARCs.

These findings concurred with a study conducted by Rossella (2011), which indicated that lack of awareness on LARCs restricts women's contraceptive choices and hence its use. Women fail to take advantage of new contraceptive methods due to lack of information and stay with the familiar options.

## Conclusions and Recommendations

## References

### Conclusions

Socio-demographic factors had no influence on utilization of LARCs. The study concluded that negative perception has an influence on the utilization of LARCs. Reproductive factors had no influence on utilization of LARCs. Health facility factors had no influence on utilization of LARCs

### Recommendations

Based on the findings, the study made the following recommendations;

1. The government should come up with measures to ensure that the curriculum taught in schools have content related to the family planning particularly LARCs.
2. Education campaigns should be conducted on family planning methods to reduce fears on the negative perception and misconceptions from peers of women who used LARC. Encouragement should be fostered on spouses' or partners on the need and importance of utilization supporting women on the use of LARCs.
3. Young women should be educated on the need and reasons for the use of LARC. Through this they will be able to enhance their usage of LARCs.
4. Awareness should be created more on women through counseling on one on one counseling by the health facility to enable them understand advantages and side effects of using LARCs.
5. One to one Counseling on family planning methods should be provided to women. This will ensure more women understand and decide on the use of LARCs.
6. Further study should be conducted to produce better evidence focusing on the service providers Influence on the use of LARC among adolescents and nulliparous.
7. A study should be done on the specific LARCs usage among women of reproductive age for better evidence on low utilization of specific LARCs.
8. A study should be done with a larger sample size of nurses to produce more responses on the use of LARCs for more accurate results.

- Blumenthal, P. D., Voedisch, A., & Gemzell-Danielsson, K. (2011). Strategies to prevent unintended pregnancy: Increasing use of long-acting reversible contraception. *Human Reproductive Update*, 17, 121-137.
- Boonstra, H. (2013). Leveling the playing field: The promise of long-acting reversible contraceptives for adolescents. *Guttmacher Policy Review Fall Journal*, 16(4). 13-18.
- Center for Reproductive Rights. (2010). *The right to contraceptive information and services for women and adolescents* (Briefing Paper). New York, NY: Author.
- Family Planning Office. (2016). Huruma Sub-County Hospital, Kenya.
- Finer, L. B., Jerman, J., & Kavanaugh, M. (2012). Changes in the use of long-acting contraceptive methods in the United States. *Fertility and Sterility Journal*, 98(4), 893-897.
- Finer, L. B., & Zolna, M. R. (2014). Shifts in intended and unintended pregnancies in the United States, 2001-2008. *American Journal of Public Health*, 104(S1), S44-S48.
- Fisher, R. A. (1934): Research methods. Sage publication Journal for the United States, 1990-2005: An update. *Natl Vital Stat Rep* 2009, 58(1), 1-14.
- Frost, J., & Darroch, J. (2008). Factors associated with contraceptive choice and inconsistent method use. *Perspective on Sexual and Reproductive Health Journal*, 40(2), 94-100.
- Frost, J., Darroch, J., & Remez, L. (2008). *Improving contraceptive use in the United States*. Issues Brief (Alan Guttmacher Inst.).
- Harmovich, S. (2009). Profile of LARC users in Europe. *The European Journal of Contraception and Reproductive Health Care*, 14(3), 187-200.
- Health Statistics Office. (2016). Uasin Gishu County, Kenya. Kenya National Bureau of Statistics (2010). *Kenya demographic and health survey 2008-09*. Calverton, Maryland: KNBS and ICF Macro.
- Kiprotich, K. (2014, December 7). How emergency and long-contraceptives work. *Standard*. Retrieved from <https://www.standardmedia.co.ke/lifestyle/article/2000143819/how->



emergency-and-long-term-contraceptives-work

- Loha, E., Assefa, M., Jira, C., & Tessema, F. (2003). Assessment of quality of care in family planning services in Jimma zone, Southwest Ethiopia.. *Perspectives on Sexual and Reproductive Health Journal*, 40(2), 94-104.
- Mwaliko, E. (2009). *Maternal mortality in Uasin Gishu district, Kenya: An exploration of coverage and use of maternal health care services* (Unpublished master's thesis). Free University of Amsterdam, The Netherlands.
- National Institute for Health and Clinical Excellence (NICE). (2014). *Long acting reversible contraception: the effective and appropriate use of long acting reversible contraception*. London: National Collaborating Centre for Women's and Children's Health.
- Rosella, N. (2011). Knowledge gap restricts women's contraceptive choice. *Women's health/ gynaecology Journal*, 118(15), 118-184.
- Smith, R., Ashford, L., Gribble, J., & Clifton, D. (2009). *Family planning saves lives* (4th ed.). Washington, D. C.: Population Reference Bureau.
- Stoddard, A., McNicholas, C., & Peipert, J. (2011). Efficacy and safety of long-acting reversible contraception. *Drugs*, 7(8), 969-980.
- Varney, S. J., & Guest, J. F. (2004). Relative cost effectiveness of depo-provera, implanon, and mirena in reversible long-term hormonal contraception in the UK. *Pharmacoeconomics*, 22(17), 1141-1151.
- Ventura, S., Abma, J., Mosher, W., & Henshaw, S. (2009). Estimated pregnancy rates for the United States: An update, *Natl Vital Stat Rep*, 58(1), 1-14.
- White, J., & Speizer, I. (2007). Can family planning outreach bridge the urban-rural divide in Zambia? *BMC Health Services Research*, 7(143). doi:10.1186/1472-6963-7-143
- Winner, B., Peipert, J., Zhao, O., Buckel, C., Madden, T., Allsworth, J., & Secura, G. (2012). Problems caused by non-effective family planning. *N Engl J Med*, 366, 1998-2007.

