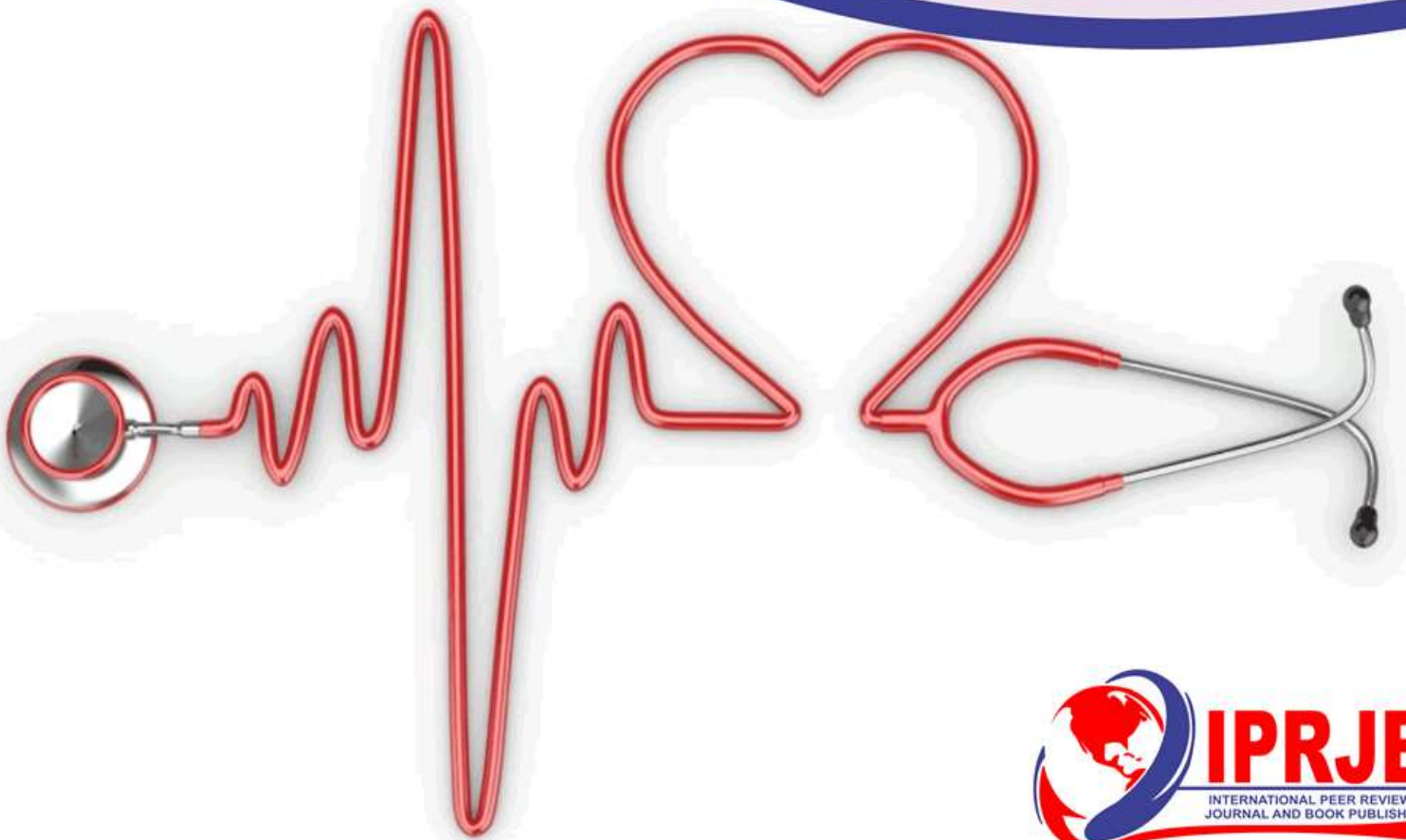


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Socio - Cultural Factors Influencing Uptake of Long Term and Permanent Methods of Family Planning Among Women of Reproductive Age in Baringo North Sub-County, Baringo County, Kenya

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Abstract

Purpose: The aim of this study was to assess the prevalence of utilization of long-acting permanent methods (LAPMs) of family planning (FP) among women in Ossen Location, Baringo North Sub-County of Kenya, and to determine the influence of myths and misconceptions on women's choice about LAPMs options.

Methodology: This study adopted a descriptive cross-sectional design and a mixed method research (MMR) approach, which allowed for concomitant collection of qualitative and quantitative data. The target population of the study consisted of all 2440 women of reproductive ages (15-49 years) in Ossen location. The sample size consisted of 421 women, selected using stratified random sampling. Women willing to participate, able to give informed consent, in reproductive age, and having resided in the area for at least six months were included in the study.

Findings: The prevalence of FP in the study area was 66%, with more women (61%) using short term FP methods (pills and Depo-Provera) compared to those using long-acting reversible contraceptive methods (implants and intra-uterine contraceptive devices/IUCD) [39%] and LAPM/tubal ligation (0%). The study found significant myths and misconceptions about LAPMs: IUCD, tubal ligation and implants. The study found that women who harbored myths and misconceptions about IUCD, tubal ligation and implants were likely to use short-term FP methods such as pills rather than LAPMs.

Unique Contributions to Theory, Practice and Policy: This study reports on interesting myths and misconceptions still extant among women in a typical county in Kenya. The research also documents a clear relationship between the existence of myths and misconceptions and the unlikelihood of using LAPMs. Consequently, the study recommends for adoption of approaches that remove the myths and misconceptions in the whole population and improve the poor attitude and negative perception towards LAPMs.

Keywords: *LAPM, IUCD, Tubal Ligation, Implants, Family Planning*

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INTRODUCTION

Roughly, a half of all pregnancies in the world are unplanned while around 80 million pregnancies occurring annually in the developing world are unexpected. Of these, it is estimated that 40 million will result in abortion, 10 million in miscarriage while only 30 million will reach full term with good outcome (Bearak et al., 2020). In Kenya, the fertility rate remains high at 3.9 births per woman, teenage pregnancy rate averages 18% while over 120, 000 unsafe abortions are procured annually (Kamuyango et al., 2020; Kenya National Bureau of Statistics, 2015). Consequently, family planning (FP) interventions could prevent unnecessary maternal death or illness due to unintended pregnancy. Family planning (FP) is the ability of individuals and couples to attain the desired number of children and to be able to space and time their births (Kantorová et al., 2020). FP is achieved through contraception or other methods of birth control and treatment of involuntary infertility. The major groups of family planning methods are: short-term methods – pills, condoms, spermicides, diaphragm or cervical cap, sponge, Depo-Provera, and injectable hormones; Long-Acting reversible contraceptive methods/LARCs – Implants and IUCD, and long acting permanent methods/LAPMs – tubal ligation and vasectomy (Hatcher, et al., 2018). These methods differ in their efficacy, temporality, and ability to both prevent pregnancy and sexually transmitted infections, which influences the way they are used. For example, (Mota et al., 2015) reported that LAPMs methods are mainly used to limit childbearing, whereas short-term methods are preferred by women who want to delay but not forfeit having children which help the mother to recover well and have a humble time to nature her young one.

Healthy timing and spacing of pregnancy are immensely beneficial. They reduce maternal mortality due to unsafe abortions (which nearly all occur in developing countries) and high-risk pregnancies and prevent maternal illness resulting from unplanned pregnancies. It is estimated that more than 287 000 mothers die yearly while about 9 million suffer debilitating injuries or serious illness, for instance, postpartum depression, feelings of powerlessness, incontinence, severe anemia, damage to reproductive organs and infertility, owing to unintended pregnancies. Smaller families and increased child spacing reduce infant and child mortality, probably because of maternal nutritional depletion; and less competition for maternal and familial resources and cross-infection from older siblings, respectively. Some contraceptives, such as condoms, also reduce the spread of sexually transmitted infections. Smaller families also improve the social and economic conditions of women and their families and could be an important pillar in achievement of most millennium development goals [MDGs] (Bongaarts et al., 2012; Kantorová et al., 2020; Kamuyango et al., 2020).

More than 200 million women in the developing world wish to avoid pregnancy but they are not on FP or using modern methods which are more effective to help them (Meskele, & Mekonnen, 2014). Improving availability of LAPMs provide effective, long-term, and easy-to-use protection against unplanned pregnancy. Despite their availability, studies show that uptake of contraceptives could be as low as 10% of married women in some Sub-Saharan African countries (Mekonnen & Worku, 2011; Joshi et al., 2015). Factors influencing the low usage, especially of LARCs and LAPMs, in some regions, including Kenya, are unknown (Gueye et al., 2015). Studies suggest that uptake of contraceptives, especially of LARCs and LAPMs could depend on various factors, for instance, womens' fear about the side effects of modern contraceptives, religion and other socio-cultural factors and access to family planning (Habtamu et al., 2019; Blackstone et al., 2017). However, these factors have not been investigated in Baringo North Sub-County. The objectives of this study were:

- i. To assess the prevalence of utilization of LAPMs of FP among women in Ossen Location, Baringo North Sub-County,
- ii. To determine the influence of myths and misconception about LAPMs and women's choice about LAPMs options in Ossen location, Baringo North Sub County.

This research was informed by structural functional theory which shows that the society works as a system of interconnected parts and for any change to occur all the stake holders have to be brought on board. Use of LAPMs could be very effective in management of all challenges of unwanted pregnancy considering its 99% effectiveness but unfortunately not utilized well because of social cultural barriers.

GAPS

There are several gaps which emanated from this study showing the relationship between the dependent and independent variables upon analysis, the following gaps were found;

- The results showed that the prevalence for short term methods in the area (pills and Depo) was 61%, for LARCs (implant and IUCD) 39% while for permanent methods it was 0%. Consequently, the dominant FP methods in the area are short-term routines with LARCs infrequently used. Permanent methods were absent
- A significant correlation between myths and misconceptions on the use of tubal ligation and the type of contraceptive chosen, $\chi^2 (4) = 17.613, p=0.001$
- A chi-square (χ^2) cross tabulation was computed to test the influence of myths and misconceptions about IUCD on women's choice between short-terms and LARCs FP methods and was found to be significant, $\chi^2 (5) = 15.168, p=0.010$
- Findings showed a significant correlation between myths and misconceptions on the use of implants and the type of contraceptive chosen, $\chi^2 (5) = 34.906, p<0.0001$

In comparison to research problem it's clear that the uptake of LAPMs in the study arrear was low because of the social cultural factors influencing the uptake .To upscale LAPMs use in family planning all the barriers have to be addressed.Explanatory research design was used to identify the methodological gaps showing that the past researchers had different opinion on the uptake of LAPMs in that some arrears registered high prevalence of the while others registered low due to barriers contributing to its consumptions. More research needs to be done in rural set up than urban arrears where people have many challenges.

MATERIAL AND METHODS

The study was carried out in Ossen location in Baringo North Sub- County, which consists of four health facilities: Kabartonjo Sub-County Hospital, Kaptum Health Centre, Tuloi and Tiriondonin dispensaries, all offering family planning services. The total population of Ossen location is 10, 166 and covers an area of 60.2 km. (census 2009). The sub-county is located between latitude 0° 39' 59.99" N and longitude: 36° 00' 0.00" E, in the former Rift Valley Province. Agriculture is the backbone the study area's economy, with coffee growing being the main economic activity, although food crops such as maize and beans are also grown in the area. Livestock keeping is done out to supplement crops farming. Most people are Christians, although there are a small number of residents who still adhere to traditional beliefs. This area was chosen because it is a rural and hardship area; therefore, it was germane to understand the perceptions and practices of the people on various family planning methods.

The study used a descriptive cross-sectional design. This design allowed collection of huge volumes of data at a defined time at reasonable cost. In addition, the design could allow the

description of relationships between variables. Given the nature of this study, it adopted a mixed method research (MMR) approach, which was apt as it allowed for concomitant collection of both qualitative and quantitative data. The target population of the study consisted of all 2440 women of reproductive ages (15-49 years) in Ossen location. These women were distributed in four sublocations as follows: Tiriondonin - 1053, Kaptum - 949, Kaimugul - 491 and Tuloi -171 [2]. The sample size for the study was 383, according to the formula and correction for sampling from small population outlined in (Noordzij et al., 2010). Nonetheless, the sample size was deliberately inflated to 421 individuals, to take care of a non-response rate of 10%. Stratified random sampling was used to select the respondents. To ensure a proportionate representation of all the sublocations in the study, the sample contributed by each sublocation was weighted according to the sublocation's target population. A sampling frame of all the households was obtained from the sub-chief's office of each sublocation and used to select respondents using systematic random sampling.

Women willing to participate, able to give informed consent, in reproductive age, and having resided in the area for at least six months were included in the study. Those unwilling to participate in the research or unable to give informed consent were excluded. Quantitative data was collected using structured questionnaires where open ended and close ended questions were used. Qualitative data was collected using four focused group discussions and key informants. Content and construct validity were achieved through literature review and adapting constructs developed by other scholars, respectively. To test the reliability of the tool, alpha Cronbach consistency coefficient (Alpha) was computed. Field work was conducted from 10th to 20th of November, 2020.

Pearson correlation (r^2) and chi square (χ^2) cross tabulations were used to determine the association between the dependent variable and independent variables. All statistical tests were performed with the aid of Microsoft excel and statistical package for social science (SPSS version 22). All tests were two – tailed. Significant levels were measured at 95% confidence level with significant differences recorded at $p < .05$.

RESULTS AND DISCUSSION

Sample Characteristics

A total of 421 women participated in the study, giving a response rate of 100%. Most women were young, with a mean age of 32 years and a standard deviation of 7.2 years. Most were married but had modest education (roughly a half had secondary school education with only a third with college education). A predominant proportion (97%) were either protestants or Catholics.

The Prevalence of Utilization of LAPMs among Women in Ossen Location

The respondents were asked whether they use family planning. Figure 1 presents these results (Figure 1).

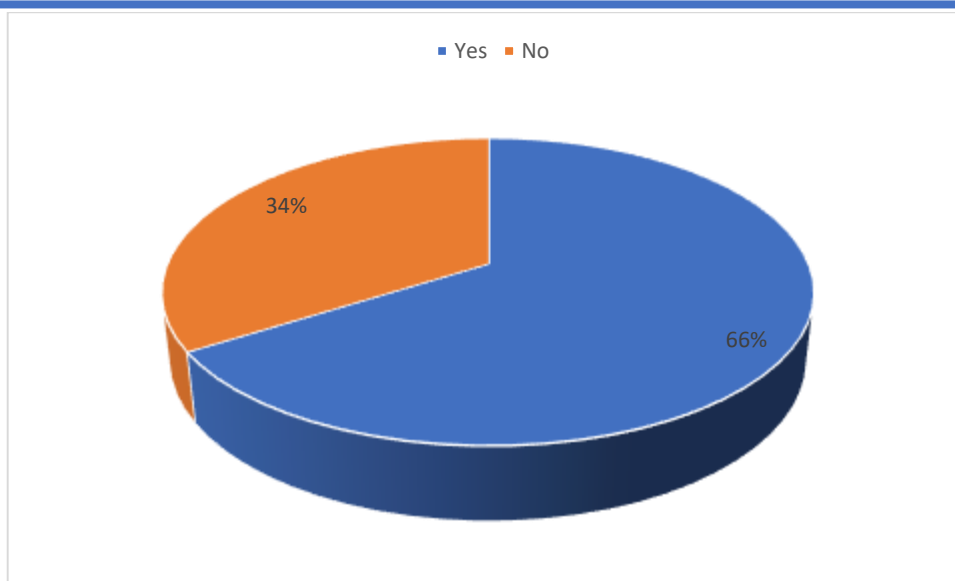


Figure 1: Respondents Who Have Used Family Planning

Results showed that two thirds of women in the study area ($n=284$, 66%) use family planning relative to only a third ($n=146$, 34%) who did not. Consequently, the prevalence of FP in the study area was 66%. The prevalence of family planning in the study area is comparable to the Contraceptive Prevalence Rate (CPR) in the whole of Kenya (58% (KNBS, 2015) and worldwide (63% in 2011 (Joshi et al., 2015).

The various methods used by participants to carry out family planning are given in Table 1.

Table 1: Family Planning Methods Used

Type of family planning used	Frequency	Percent
Oral pills	39	14.0
Depo (injection)	130	46.8
Implant	78	28.1
IUCD	31	11.1
Tubal ligation	0	0.0
Total	278	100.0

The most popular FP method was Depo (47%), followed by implants (28%) and oral pills (14%). The seldom used was IUCD while tubal ligation was never used. The results showed that the prevalence for short term methods in the area (pills and Depo) was 61%, for LARCs (implant and IUCD) 39% while for permanent methods it was 0%. Consequently, the dominant FP methods in the area are short-term routines with LARCs infrequently used. Permanent methods were absent. The findings from this study are both similar and contradictory to other studies. For example, Mota et al. (2015) similarly found higher usage of short-acting FP methods (71.6%) relative to LAPMs (28.4%). On the other hand, Joshi et al. (2015) reported that prevalence of permanent methods and IUCD to be 33% and 38% in higher income countries, respectively; 45% and 12% in 69 poorest countries, respectively; and 38% and 28% in all low-income countries, respectively.

Chi-square (χ^2) cross tabulations were conducted to test if significant relationships existed between the respondents' demographic factors and usage of FP methods. These results are presented in Table 2.

Table 2: Relationship between Use of FP and Biographical Variables

Variable	Respondents' Categories	Have Used Family Planning			χ^2	p value
		Yes	No	Total		
Age	Below 30 years	110(64.7)	60(35.3)	170(100.0)	1.135	0.567
	30 – 39 years	133(68.6)	61(31.4)	194(100.0)		
	≥ 40years	41(62.1)	25(37.9)	66(100.0)		
	Total	284(66.0)	146(34.0)	430(100.0)		
Education level	Primary	24(48.0)	26(52.0)	50(100.0)	10.208	0.017
	Secondary	127(65.1)	68(34.9)	195(100.0)		
	College	107(72.3)	41(27.7)	148(100.0)		
	University	26(70.3)	11(29.7)	37(100.0)		
	Total	284(66.0)	146(34.0)	430(100.0)		
Occupation	Farmer	74(57.4)	55(42.6)	129(100.0)	6.379	0.041
	Business	149(70.0)	64(30.0)	213(100.0)		
	Employment	52(70.3)	22(29.7)	74(100.0)		
	Total	275(66.1)	141(33.9)	416(100.0)		
Marital status	Single	89(57.1)	67(42.9)	156(100.0)	9.732	0.021
	Married	178(71.2)	72(28.8)	250(100.0)		
	Widowed	6(60.0)	4(40.0)	10(100.0)		
	Separated	11(78.6)	3(21.4)	14(100.0)		
	Total	284(66.0)	146(34.0)	430(100.0)		
Religion	Christian	125(65.1)	67(34.9)	192(100.0)	6.326	0.042
	Protestant	146(65.2)	78(34.8)	224(100.0)		
	Others	12(100.0)	0(0.0)	12(100.0)		
	Total	283(66.1)	145(33.9)	428(100.0)		

Key: Values in Parentheses are Percentages

Only respondents' age, $\chi^2 (2) = 1.135, p=.567$ was not a predictor for use of family planning. For educational level, results showed that college (72%) or university (70%) educated women were more likely to use [$\chi^2 (3) = 10.208, p=0.017$] FP compared to secondary (65%) or primary (48%) educated women. The results suggested that an increase in education level of a woman increases the likelihood of using FP. More businesspersons (70%) and those in employment (70%) were more likely to use [$\chi^2 (2) = 6.379, p=0.041$] FP relative to farmers (57%). Family planning is less likely [$\chi^2 (3) = 9.732, p=0.021$] to be used by single (57%) and widowed (60%) people compared to those who are married (71%) or separated (79%). Lastly, those who identify as Christians or Protestants (both 65%) are less likely to use FP [$\chi^2 (3) = 6.326, p=0.042$] compared to those who identify as 'Others' (100%).

The lack of age bias in the use of FP contradicts studies such as Teklemariam et al. (2016), which found the highest prevalence of LAPMs in the age group 25 – 29 years. Increase in education likely increases the use of FP, as in Alemayehu et al. (2011) study, possibly because of greater discernment of correct information about FP. Yonatan and Kibret (2016) reported that married women with positive attitude towards LAPMs are more likely to use them, which reflects findings from this study that single and widowed women were less likely to use them. More businesspersons and those in employment were more likely to use FP relative to farmers, which was like Mota et al. (2015, who argued that usage of LAPMs tend to be higher among

employed women and those in demanding careers than housewives because the former want to progress in their careers and frequently limit child bearing.

The Influence of Myths and Misconceptions about LAPMs and Women's Choice about Long-Term and Permanent Methods Options

The study asked respondents about their opinions on three types of LAPMs: IUCD, implants and tubal ligation. Table 3 presents results on IUCD.

Table 3: Myths and Misconceptions on Use of IUCD

Myths and misconceptions	Frequency	Percent	Cumulative percent
It interferes with sexual pleasures of my spouse	114	25.9	25.9
IUCD insertion procedure hurts more than child birth	91	20.6	46.5
It can migrate to other parts of the body including heart and brain	75	17.0	63.5
It is effective and you recommend its use	74	16.8	80.3
IUCD contributes to sexually transmitted diseases	65	14.7	95.0
It can lead to ectopic pregnancy	22	5.0	100.0
Total	441	100.0	

The most prevalent opinion about IUCD was that it interferes with sexual pleasures of their spouse ($n=114$, 26%), followed by feelings that insertion hurts more than child birth (21%) and that it could migrate to other parts of the body including the heart and brain (17%). These triad of opinions was believed by roughly two thirds of the participants. Only 17% of the respondents thought IUCDs were effective. Many studies have reported on myths and misconceptions about IUCD. For example, IUD have been associated with the spread of sexually transmitted infections and blamed for complications like, they can scar the fallopian tube and cause infertility among women (Okigbo et al., 2015).

A chi-square (χ^2) cross tabulation was computed to test the influence of myths and misconceptions about IUCD on women's choice between short-terms and LARCs FP methods and was found to be significant, $\chi^2 (5) = 15.168, p=0.010$ (Table 4).

Table 4: Relationship between Myths and Misconceptions on IUCD and Use of FP Methods

Myths and Misconceptions on use of IUCD		FP Methods		Total
		Short-term Methods	LARCs	
Its effective and you recommend its use	Frequency	25	26	51
	%	49.0	51.0	100.0
It can lead to ectopic pregnancy	Frequency	5	10	15
	%	33.3	66.7	100.0
It interferes with sexual pleasures of my spouse	Frequency	48	18	66
	%	72.7	27.3	100.0
It can migrate to other parts of the body	Frequency	35	19	54
	%	64.8	35.2	100.0
IUCD contributes to STDs	Frequency	38	17	55
	%	69.1	30.9	100.0
IUCD insertion procedure hurts more than child birth	Frequency	34	30	64
	%	53.1	46.9	100.0
Total	Frequency	185	120	305
	%	60.7	39.3	100.0

Key: STD=Sexually Transmitted. $\chi^2 (5) = 15.168, p=0.010$

The results showed women who believe IUCD as effective are likely to use equally either short-term (49%) or LARCs (51%) methods. However, those who believe IUCD interferes with sexual pleasures of their spouses (73%), can migrate to other parts of the body (65%), contributes to sexually transmitted diseases (69%) and insertion procedure hurts more than child birth (53%) were likely to use short-term methods of FP rather than LARCs. Thus, overall, the results suggest that myths and misconceptions are likely to dissuade women from using LARCs but encourage them to use short-term methods, as previously reported (Okigbo et al., 2015).

Table 5 presents respondents' opinions about tubal ligation.

Table 5: Myths and Misconceptions on Tubal Ligation

Myth and misconception	Frequency	Percent	Cumulative percent
Tubal ligation can lead to long term illness because it involves surgical operation	158	35.8	35.8
It can lead to cancers of the reproductive system	94	21.3	57.1
It is a very good method of family planning	82	18.6	75.7
It can lead to lowered libido which can lead to divorce	62	14.1	89.8
Menstrual periods will stop	45	10.2	100.0
Total	441	100.0	

Results showed that four out of every ten respondents (36%) thought that tubal ligation leads to long term illness because it involves surgical operation while 21% of them thought it causes

cancers of the reproductive system. Moreover, 14% of them thought that it can lead to lowered libido and therefore, divorce. Only 19% thought that tubal ligation was a good method of family planning. The predominant views about tubal ligation were myths and misconceptions, which could explain why no woman in the study was found to have undergone this procedure. Authors such as Mota et al. (2015) believe that many of the myths and misconceptions arise from lack of adequate knowledge. This certainly could be the case. For example, a belief that tubal ligation lead to lowered libido or cause menstrual periods to stop, comes from ignorance as the procedure does not interfere with hormonal production and movement and hence it will have no effect on either libido or periods.

A significant correlation between myths and misconceptions on the use of tubal ligation and the type of contraceptive chosen, $\chi^2(4) = 17.613, p=0.001$, was found (Table 6).

Table 6: Relationship between Myths and Misconceptions on TL and Use of FP Methods

Myths and misconceptions about TL		FP Methods		Total
		Short-term Methods	LARCs	
It is a very good method of FP	Frequency	32	21	53
	%	60.4	39.6	100.0
It can lead to lowered libido which can lead to divorce	Frequency	38	7	45
	%	84.4	15.6	100.0
It can lead to cancers of the reproductive system	Frequency	44	24	68
	%	64.7	35.3	100.0
Menstrual periods will stop	Frequency	20	14	34
	%	58.8	41.2	100.0
Can lead to long term illness because it involves surgery	Frequency	51	54	105
	%	48.6	51.4	100.0
Total	Frequency	185	120	305
	%	60.7	39.3	100.0

Key: TL=Tubal Ligation. $\chi^2(4) = 17.613, p=0.001$

Women who believed that tubal ligation can lead to lowered libido (84%), cancers of the reproductive system (64%), and stop menstrual periods (59%) were more likely to use short-term methods rather than LARCs. The results suggested that the debunking of misconceptions about tubal ligation could be a precondition for their accelerated uptake. Table 7 presents respondents' opinions about implants.

Table 7: Myths and Misconceptions on Use of Implants

Myth and misconception	Frequency	Percent	Cumulative percent
Implants are very effective method of FP and you recommend its use	178	40.4	40.4
One can increase weight	73	16.6	56.9
It can migrate to other parts of the body	63	14.3	71.2
Implants can lead to excessive vaginal bleeding	52	11.8	83.0
It reduces sexual desire	42	9.5	92.5
One can becomes sick and weak to perform heavy duty	33	7.5	100.0
Total	441	100.0	

More women (40%) thought implants were effective compared with IUCD and tubal ligation (Tables 3 & 5, respectively). However, roughly six out of every ten respondents were misguided about implants, with 17% believing they increase weight, migrate to other parts of the body (14%), lead to excessive vaginal bleeding (12%), reduce sexual desire (10%), and cause sickness and weakness (8%).

Findings showed a significant correlation between myths and misconceptions on the use of implants and the type of contraceptive chosen, $\chi^2 (5) = 34.906, p < 0.0001$ (Table 8).

Table 8: Relationship between Myths and Misconceptions on Implants and Use of FP Methods

Myths and misconceptions about implants		FP Methods		Total
		Short-term Methods	LARCs	
Implants are very effective method of FP	Frequency	60	64	124
	%	48.4	51.6	100.0
Implants can lead to excessive vaginal bleeding	Frequency	15	12	27
	%	55.6	44.4	100.0
It can migrate to other parts of the body	Frequency	27	7	34
	%	79.4	20.6	100.0
One can increase weight	Frequency	37	19	56
	%	66.1	33.9	100.0
One can becomes sick and weak to perform heavy duty	Frequency	8	14	22
	%	36.4	63.6	100.0
It reduces sexual desire	Frequency	38	4	42
	%	90.5	9.5	100.0
Total	Frequency	185	120	305
	%	60.7	39.3	100.0

Key: FP=Family Planning. $\chi^2 (5) = 34.906, p < 0.0001$

Women who believed that implants lead to excessive vaginal bleeding (58%), can migrate to other parts of the body (79%), can increase one's weight (66%) and reduces sexual desire (91%) were more likely to use short-term methods rather than LARCs. Findings from this study suggest that training health workers and equipping hospitals may not be enough to increase

uptake of LAPMs. Instead, concerted efforts are required to debunk the myths and misconceptions.

CONCLUSION AND RECOMMENDATIONS

This study investigated the socio-cultural factors influencing the uptake of LAPMs among women in Baringo County. The prevalence of FP in the study area was 66%. The most popular FP method was Depo (47%), followed by implants (28%) and oral pills (14%). The seldom used was IUCD while tubal ligation was never used. The results showed that the prevalence for short term methods in the area (pills and Depo) was 61%, for LARCs (implant and IUCD) 39% while for permanent methods it was 0%. Consequently, the dominant FP methods in the area are short-term routines with LARCs infrequently used. Permanent methods were absent.

The study found significant myths and misconceptions about LAPMs: IUCD, tubal ligation and implants. IUCD was thought to interfere with sexual pleasures of the spouse, its insertion was more painful than child birth, it could migrate to other parts of the body and causes sexually transmitted diseases. Respondents thought tubal ligation leads to long term illness, cancers of the reproductive system and lowered libido. Only two out of every ten women thought that tubal ligation or IUCD were good methods of family planning. Implants were thought to increase weight, migrate to other parts of the body, lead to excessive vaginal bleeding and reduces sexual desire. Respondents who thought that IUCD, tubal ligation or implants were not effective were likely to use short term FP methods rather than LARCs.

There is need for a whole range of approaches to remove the myths and misconceptions in the whole population and improve the poor attitude and negative perception towards LAPMs. Such methods could be the introduction of targeted sex education in schools, which could introduce the right information at an early age, training and equipping community health workers, and mass education of communities.

REFERENCES

- Alemayehu, M., Belachew, T., & Tilahun, T. (2012). Factors associated with utilization of long acting and permanent contraceptive methods among married women of reproductive age in Mekelle town, Tigray region, North Ethiopia. *BMC Pregnancy and Childbirth*, 12, 6.
- Bearak, J., Popinchalk, A., Ganatra, B., Moller, A., Tunçalp, O., Beavin, C., Kwok, L., & Alkema, L. (2020). Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. *The Lancet*, 8, e1152. [https://doi.org/10.1016/S2214-109X\(20\)30315-6](https://doi.org/10.1016/S2214-109X(20)30315-6)
- Blackstone, SR., Nwaozuru, U., & Iwelunmor, J. (2017). Factors influencing contraceptive use in Sub-Saharan Africa: A systematic review. *Community Health Equity Research & Policy*, 37 (2), 79-91. <https://doi.org/10.1177/0272684x16685254>
- Bongaarts, J., Cleland, J., Townsend, J., Bertrand, J., & Gupta, M. (2012). *Family planning programs for the 21st century: Rationale and design*. New York: The Population Council, 94 p.
- Gueye, A., Speizer, I., Corroon, M., & Okigbo, C. (2015). Belief in family planning myths at the individual and community levels and modern contraceptive use in urban Africa. *Int. Perspect. Sex. Reprod. Health*, 41, 191–199.
- Habtamu, A., Tesfa, M., Kassahun, M., & Animen, S. (2019). Determinants of long-acting contraceptive utilization among married women of reproductive age in Aneded district, Ethiopia. *BMC Research Notes*, 12, 433.
- Hatcher, R., Nelson, A., Trussell, J., Cwiak, C., Cason, P., Policar, M., & Aiken, A. (2018). *Contraceptive technology* (21st ed). New York: Ayer Company Publishers, Inc. <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003026>
- Joshi, R., Khadilkar, S., & Patel, M. (2015). Global trends in use of long-acting reversible and permanent methods of contraception: Seeking a balance. *International Journal of Gynecology & Obstetrics*, 131(51), 560-563. <https://doi.org/10.1016/j.ijgo.2015.04.024>
- Kamuyango, A., Hou, W., & Li, C. (2020). Trends and contributing factors to contraceptive use in Kenya: A large population-based survey 1989 to 2014. *Int. J. Environ. Res. Public Health*, 17, 7065. doi:10.3390/ijerph17197065
- Kantorová, V., Wheldon, M.C., Ueffing, P., & Dasgupta, A. (2020). Estimating progress towards meeting women’s contraceptive needs in 185 countries: A Bayesian hierarchical modelling study. *PLoS Med*, 17(2): e1003026.
- Kenya National Bureau of Statistics (2015). Kenya Demographic and Health Survey 2014. 1–603. <https://www.nutritionhealth.or.ke/wpcontent/uploads/Downloads/kenya%20Demographic%20and%20Health%20Survey%20KDHS%20Report%202014.pdf>
- Mekonnen, W., & Worku, A. (2011). Determinants of low family planning use and high unmet need in Butajira District, South Central Ethiopia. *Reproductive Health*, 8, 37.
- Meskele, M., & Mekonnen, W. (2014). Factors affecting women’s intention to use long acting and permanent contraceptive methods in Wolaita Zone, Southern Ethiopia: a cross-sectional study. *BMC Women’s Health*, 14:109.

- Mota, K., Reddy, S., & Getachew, B. (2015). Unmet need of long-acting and permanent family planning methods among women in the reproductive age group in shashemene town, Oromia region, Ethiopia: a cross sectional study. *BMC Women's Health*, *15*, 51 DOI 10.1186/s12905-015-0209-y
- Mwaisaka, J., Gonsalves, L., Thiongo, M., Waithaka, M., Sidha, H., Agwanda, A., mukiira, C., & Gichangi, P. (2020). Exploring contraception myths and misconceptions among young men and women in Kwale County, Kenya. *BMC Public Health*, *20*, 1694. <https://doi.org/10.1186/s12889-020-09849-1>
- Noordzij, M., Tripepi, G., Dekker, F., Zoccali, C., Tanck, M., & Jager, K. (2010). Sample size calculations: basic principles and common pitfalls. *Nephrol Dial Transplant*, *25*, 1388-1393.
- Okigbo, C., Speizer, I., Corroon, M., & Gueye, A. (2015). Exposure to family planning messages and modern contraceptive use among men in urban Kenya, Nigeria, and Senegal: A cross-sectional study. *Reproductive Health*, *12*(63). <https://doi.org/10.1186/s12978-015-0056-1>
- Teklemariam, G., Hailu, D., & Workineh, Y. (2016). Predictors of long-acting contraceptives utilization among reproductive age women in Arba Minch Zuria district, Ethiopia. *Quality in Primary Care*, *24*, 17 - 28.
- Yonatan, M., & Kibret, K. (2016). Practice and Intention to use long acting and permanent contraceptive methods among married women in Ethiopia: Systematic meta-analysis. *Reproductive Health*, *13*, 78.