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Intention to Use Long Acting and Permanent Contraceptives Methods and Associated Factors among Family Planning Clients in West Ethiopia

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Abstract

Background: Long acting and permanent methods (LAPMs) of family planning (FP) are essentially important to achieve health related goals, and to meet individuals and couple's needs. Worldwide, an estimated 80 million (38.1%) of all pregnancies are unintended and 33 million of these are due to ineffective use of a contraceptives. An increase in the use of LAPMs can reduce unintended pregnancies and the incidence of abortion. But, utilization of LAPMs is very low. Yet, the level and barriers to the use of LAPMs are not well explored in the study area. Therefore, this study was to assess intention to use LAPMs and associated factors among FP clients in Nekemte Town.

Methods: Health facility based cross-sectional study was conducted on randomly selected 388 subjects in March 2015. The sample subjects were selected from all health facilities providing FP services considering proportional to sample size. Data were collected using an interviewer-administered questionnaire, entered to Epi Data version 3.1 and analyzed using SPSS version 21. Multivariable logistic regression using step-wise selection method was done to identify predictors of intention to use LAPMs at P value <0.05. Qualitative data were translated, transcribed and presented in narration to supplement the quantitative study.

Results: The prevalence of intention to use LAPMs was 52.2%. Intention to use LAPMs was higher among respondents who had supportive attitude (AOR: 2.1; 95% CI: 1.3, 3.4) and increases with literacy level, where it was more than two times, five times and seven times higher among those who attended primary (AOR: 2.6; 95% CI: 1.2, 5.8), secondary (AOR: 5.2; 95% CI: 2.2, 12.6) and higher education (AOR=7.6; 95% CI: 2.9-19.7) compared to non-educated ones, respectively. It was also higher among mothers who had no myths and misconception on LAPMs (AOR: 2.1; 95% CI: 1.2, 3.6) and who had not perceived IUCD and/or implants negatively (AOR: 2.0; 95% CI: 1.2, 3.5). Those mothers who did not have functional television had lower intention of using LAPMs (AOR: 0.55; 95% CI: 0.32, 0.96).

Conclusion: The prevalence of intention to use LAPMs was low, presence of myths and misconception, lack of education, unfavorable attitude and lack of functional television adversely affected intention to use LAPMs. Social and behavioral change communication should address factors that hinder intention to use LAPMs.

Keywords: Contraceptives; Family planning; Intention; LAPMs

Background

Family planning (FP) is defined as the ability of individuals and couples to attain their desired number of children and the spacing and timing of their births. It is a means of promoting the health of women and families and part of a strategy to reduce the high maternal, infant and child mortality [1]. Global experience confirms that without broad availability and use of effective modern FP, fertility levels would remain high, the problem of maternal and child mortality would continue to be intractable, and national development would be held back [2]. LAPMs are critical to the contraceptive method mix and choice, highly effective, safe and low cost over time, not require continuous resupply, suitable for a range of reproductive intentions and appropriate for almost all women and can be used over a longer period of time, with less discontinuation rate [3].

It is estimated that 210 million pregnancies occur each year; 80 million are unintended and 33 million of these are due to ineffective use of a contraceptive method [4]. Approximately, one-third of maternal deaths could be avoided annually if women who did not wish to become pregnant had access to and use effective contraceptives [5]. Using contraception clearly indicates that a woman does not want to become pregnant. Yet, every year millions of women become pregnant while using contraception. If LAPMs were used instead of less-effective short-term FP methods, they would substantially reduce the number of unintended births and induced abortions and could have helped families and countries achieve their health goals [6].

Ethiopia is the fast growing, second most populous nation in Africa with 95.9 million in 2014 [7]. According to EDHS 2011 report, Maternal mortality ratio (MMR) was 676 per 100,000 live birth with an estimated 32% of all maternal deaths related to unsafe abortions [8,9]. Twenty five percent of currently married women had an unmet need for FP, 16% had a need for spacing, and 9% had a need for limiting [8].

LAPMs utilization rate was very low, which include female sterilization (0.1%), IUCD (0.8%) and implants (3.4%). Twelve-month contraceptive discontinuation rate for all methods was 37%, the highest rate was pill (70%), followed by the male condom (62%). The prevalence of LAPMs in Oromia, the study region, was similar to national level, female sterilization (0.2%), IUCD (0.3%) and implant (3.4%) [8].

Ethiopian Federal Ministry of Health has been giving increased attention to the expansion of LAPMs, but the utilization and intention to use LAPMs remained low [10,11]. Similar to national and regional level, its utilization is very low in the present study area, so scientific evidence is important for planner and decision makers. The results of this study are expected to be useful to governmental and non-governmental organization to design appropriate intervention plan to improve utilization of LAPMs and give priority to the area that needs due attention.

Methods

Health facility based cross sectional study was conducted in Nekemte Town, Oromia Region-al State, Western Ethiopia in March, 2015. The town is located at 334 km to the west from Addis Ababa, the capital city of Ethiopia. Administratively subdivided into six administrative sub-cities, each of them has two kebeles (the smallest administrative unit). According to 2007 Ethiopian national census projected to 2015, the town has population of 104,806; of whom 53,484 males and 51,322 are females. The town has two health centers, public referral hospital, five non-governmental clinics, 44 private clinics, 31 drug stores, six drug whole sales and 11 pharmacies. Seven health facilities were providing FP services.

The study population was randomly drawn sample of short-term FP users in health facilities providing FP service in the Town. Interview was conducted with one or two of FP service providers per health facility. Sample size was determined using single population proportion formula, with assumption 95% confidence level, 5% margin of error and 48% proportion of women who intended to use LAPMs [12]. Adding 10% non-response, the final sample size was calculated to be 388. The sample subjects were selected from all health facilities providing FP services considering proportion of client flow, based on the town quarter report of October-December, 2014.

Systematic random sampling technique was used to identify client respondents for interview. To assess facilities and provider related factors, in depth interviews were held with 10 FP service providers and seven of the health facilities providing FP services were assessed for availability of LAPMs supplies and presence of trained FP providers.

Measurements

The outcome variable in this study was intention to use LAPMs measured as "yes" for those intended to use and "no" for those not intended to use these methods. Independent variables include: socio demographic factors, socio-economic factors, reproductive factors, number of children, person who decided number of child, discussion with partner on FP methods, discussion with HEWs/other health professionals on LAPMs, knowledge of LAPM, attitude to-ward LAPMs, myths and misconception about LAPMs.

Knowledge of study participants was measured by using a total number of 10 items of knowledge questions, which was taken from literature [13] with minimum score '0' and maximum 10. The score was computed by adding each response and then categorized as "high" those who knew eight or above, "moderate" those who knew six to seven and "low" those who knew five or less points.

The attitude of FP clients was measured using Likert scale, which assesses whether the clients strongly agree, agree, neutral, disagree and strongly disagree with the items listed regarding the need for LAPMs and then categorized into "strongly disagree/disagree" as "disagree", "neutral" as it is and "strongly agree/agree" as "agree". To check whether individuals' attitude has association with intention to use LAPMs, mean score was used as cut point, where those scored above the mean were categorized as having positive attitude to towards LAPMs and those scored the mean or below were considered as having negative attitude towards LAPMs.

Data processing and analysis

Data were checked for completeness and entered into EpiData version 3.1 and exported to SPSS version 21 statistical software for analysis. After cleaning data for inconsistencies and missing value in SPSS, descriptive statistics such as mean, Standard deviation (SD), percent and frequency were computed. Bi-variate analysis was done in binary logistic regression and all independent variables which have association with the dependent variable at p values up to 0.25 were selected for multivariate logistic regression analysis. Multicolinarity was checked before running multivariate logistic regression. Then multivariable logistic regression using step-wise selection method was done to identify predictors of intention to use LAPMs at P value <0.05. Findings were presented using Odds Ratios (ORs) and their respective 95% confidence intervals (CIs). Qualitative data from FP service providers were translated, transcribed and analyzed manually and presented in narrative manner.

Ethical consideration

Ethical clearance was obtained from the ethical review board of Jimma University College of health Sciences and the respective study health facilities were communicated with formal letters written from Oromia Regional Health Bureau, Nekemte Town Health Office. Informed verbal consent was obtained from each study participants after clear explanation about the purpose of the study, and confidentiality and privacy of the respondent were maintained. Detail explanation was given to the study participants on the fact that data collection procedure had no any harm to them and other community, and the findings of the study are communicated in aggregated manner.

Results

Socio demographic characteristics of the respondents

A total of 383 respondents were included in this study (98.7%). The mean age of study participants were 24.9 years (SD=± 4.6) with a range of 15 to 40 years. Close to half of the participants (48.3%) were within the age group of 15-24 years. Eight three percent of the respondents were Oromo by ethnicity, 207(54%) were protestant by religion, and slightly more than three-fourth (76.5%) of them were urban dwellers. Almost all (97.9%) of them were married. One hundred twenty (31.5%) of them had attended primary education and about half (50.9%) of them were housewives (Table 1).

Characteristic		N (%)	Intention to use LAPMs	
			Yes, N (%)	No, N (%)
Age	15-24	185(48.3)	98(53.0)	87(47.0)
	25-34	178(46.5)	93(52.2)	85(47.8)
	≥ 34	20(5.2)	9(45.0)	11(55.5)
	Total	383	200	183
Ethnicity	Oromo	318(83.0)	178(56.0)	140(44.4)
	Amhara	49(12.8)	18(38.8)	31(61.2)
	Gurage	16(4.1)	4(25.0)	12(75)
	Total	383	200	183
Religion	Orthodox	130(33.9)	63(48.5)	67(51.5)
	Muslim	43(11.2)	17(39.5)	26(60.5)
	protestant	207(54.0)	117(56.5)	90(43.5)
	Others*	3(0.8)	3(100.0)	0(0.0)
	Total	383	200	183
Residence	Urban	293(76.5)	172(58.7)	121(41.3)
	Rural	90(23.5)	28(31.1)	62(68.9)
	Total	383	200	183
Educational status	Illiterate	64(16.7)	13(20.3)	51(79.7)
	1-8 grade	120(31.3)	57(47.5)	63(52.5)
	9-12 grade	103(26.9)	62(60.2)	41(39.8)
	12+ grade	96(25.1)	68(70.8)	28(29.2)
	Total	383	200	183
Marital status	Married	375(97.9)	198(52.8)	177(42.2)
	Not in marriage	8(2.1)	2(25.0)	6(75.0)
	Total	383	200	183
Occupation	Housewife	195(50.9)	91(46.7)	104(53.3)
	Merchant	68(17.8)	32(47.1)	36(52.9)
	Employed	76(19.8)	51(67.1)	25(32.9)
	Others**	44(11.5)	26(59.1)	18(40.9)
	Total	383	200	183

* Catholic, ** Daily labor, waiter, students

Table 1: Socio demographic characteristics of study participants (n=383) and intention to use LAPMs, Nekemte Town, March 2015.

Socio economic status of the study participants

Above half (54.3%) of the respondents have monthly household income of more than 2000 Ethiopian Birr (ETB) and nearly a quarter, 90(23.5%) of respondents have monthly household income of less than 1000 ETB. The median monthly family income was 2500 ETB, the range lies between 200 to 9000 ETB. More than half of the participants reported they have television 225(58.7%) (Table 2). Majority (85.0%) of the respondents reported to have accessibility to some forms of FP messages in the past few months prior to the study. The sources of their messages were, health professionals 217(66.2%), mass media 123(37.5%), neighbors/friends or relatives 38(11.6%) and schools 10(3%). More than three-fourth (77.0%) of the participants had discussed with health extension workers (HEWs) or other health professionals about practice of LAPMs in the last few months preceding the study. Similarly, 85% of the respondents reported that they had discussed with their partners about FP methods.

Characteristic	Categories	Intention to use LAPMs		
		Yes N(%)	No N(%)	Total N(%)
Have functional TV	Yes	128(56.9)	97(43.1)	225(58.7)
	No	72(45.6)	86(54.4)	158(41.2)
Have functional radio	Yes	140(57.1)	105(42.9)	245(63.9)
	No	60(43.5)	78(56.5)	138(36.1)
Income in Ethiopian Birr	<1000	52(57.8)	38(42.2)	90(23.5)
	1000-2000	42(49.4)	43(50.6)	85(22.2)
	>2000	106(51.)	102(49)	208(54.3)
Age at marriage	<18	77(43.3)	101(56.7)	178(47.1)
	≥ 18	121(60.5)	79(39.5)	200(52.9)
Age at delivery	<18	23(35.9)	41(64.1)	64(19.7)
	≥ 18	143(54.8)	118(45.2)	261(80.3)
Number of child	≤ 2	129(55.4)	104(46.6)	233(71.7)
	≥ 3	37(40.2)	55(59.8)	92(28.3)
Who decided	Husband	16(34.8)	30(65.2)	46(12.0)
Number of child	Wife	6(24)	19(76)	25(6.5)
	Both	178(57.1)	134(42.9)	312(81.5)

Table 2: Socio-economic and reproductive variables and intention to use LAPMs of contraceptives, Nekemte Town, March, 2015.

Reproductive characteristic of the respondents

Close to half (47%) of the respondents were married at age of less than 18 years and 261(80.3%) of them gave birth before the age of 19 years. The mean age of participants at marriage and first delivery were 19.2(SD= ± 2.7) and 20.7(SD= ± 2.7) years, respectively. Fifty eight (15.1%) of the respondents had have never given birth before the time of data collection. Two hundred thirty three (71.7%) of the respondents had two or more children. The median number of children born to the respondents was two, ranging from one to nine children. Slightly above three-fourth (76.5%) of the respondents did not want to have child within the coming two years as of the period of this study. Three-forth (75.3%) of the respondents were spacers of births. About eight two (81.5%) of the respondents had decided their number of children after joint discussion with their husbands whereas

46(12.0%) and 25(6.5%) had decided by husbands and wives alone, respectively (Table 2).

Family planning service provider's interview

From the total of 10 FP providers interviewed, eight were females, two midwifes, four health officers and four clinical nurses in profession with 13.8 mean years of work experiences. Out of the 7 health facilities observed, three of the health facilities had trained health providers on all forms of LAPMs, two of the facilities had trained providers only on implants, one facility had trained provider on IUCD and implants, and one of the other facility had no trained providers on all form of LAPMs. Three of the facilities had only implants, one facility had both implants and IUCD and the other three of the facilities had all supplies of LAPMs.

Knowledge of study participants on LAPMs of contraceptives

All the study participants had heard at least one type of LAPMs. From the total study participants, 98.2%, 89.6%, 41% and 13.1% had heard about implants, IUCD, tubal ligation and vasectomy, respectively. Permanent methods were the least known methods. Majority 341(89%) of the participants were aware that IUCD can protect pregnancy for more than 10 years, 264(69%) of them had awareness that women become immediately pregnant when IUCD is removed and 172(44.9%) of women had information that IUCD has no interference with sexual desire. Majority of women (94.8%) had awareness that implant can protect pregnancy from 3-5 years and 307(80%) of them had knowledge that implant requires minor surgical procedure during insertion and removal. From the total respondents, 304(79.0%) of them were aware that women become pregnant immediately when implant is removed. Concerning to permanent methods, 243(63.4%) and 109(28.5%) of participants had awareness that tubal ligation and vasectomy are not reversible (Table 3). After computing knowledge score of the respondents on LAPMs, 101(26.4%), 77 (20.1%), 205(53.5%) of the respondents had low, moderate and high knowledge on LAPMs of contraceptives respectively.

Characteristics			N (%)
Knowledge of long acting &permanent methods (LAPMs) of contraceptives		Yes	383(100)
		No	0(0.00)
Type of LAPM known*	Implants	Yes	376(98.2)
		No	7(1.8)
	IUCD	Yes	343(89.6)
		No	40(10.4)
	Tubal ligation	Yes	157(41.0)
		No	226(59.0)
	Vasectomy	Yes	50(13.1)
		No	333(86.9)
IUCD can prevent pregnancy for more than 10 years		Yes	341(89.0)
		No	26(6.8)
		Not sure	16(4.2)
Implant can prevent pregnancies for 3-5 years		Yes	363(94.8)
		No	12(3.1)
		Not sure	8(2.1)
After female sterilization pregnancy is not possible		Yes	243(63.4)
		No	89(23.3)
		Not sure	51(13.3)
Women become pregnant immediately when implant is removed		Yes	304(79.4)
		No	31(8.1)
		Not sure	48(12.5)
Women become pregnant immediately when IUCD is removed		Yes	264(68.9)
		No	32(8.4)
		Not sure	87(22.7)
IUCD has no interference with sexual intercourse or desire		Yes	172(44.9)
		No	91(23.8)
		Not sure	120(31.3)
Implants require minor surgical procedure during insertion and removal		Yes	307(80.2)
		No	38(9.9)
		Not sure	38(9.9)
Vasectomy is not reversible		Yes	109(28.5)
		No	96(25.0)
		Not sure	178(46.5)
*Multiple answers are possible			

Table 3: Knowledge of study participants about LAPMs of contraceptives (n=383) in Nekemte Town March, 2015.

Family planning provider interviewee and who had training on the LAMPs said "*Majority of our clients know implants and IUCD but I don't think that clients know about permanent methods particularly vasectomy. They hear and trust what their neighbors or friends said than what we advise them. Due to minor side effects clients want to discontinue using of these methods.*"

One of FP service provider said "*I have taken training on LAPMs, client prefer short term methods due to low awareness on LAPMs in general, even most of the client don't know the availability of vasectomy methods, and client consider female sterilization when other options of FP methods are not appropriate for her. Clients were not properly counseled due to shortage of time.*"

Attitude of study participants towards LAPMs of contraceptives and its side effects

Nearly half 189(49%) of the participants disagree that insertion and removal of implant is not painful. Thirty three percent of participants disagreed that using implant and/or IUCD do not restrict from normal activities or hard work. Nearly half (48%) of the respondent disagreed that IUCD cannot harm womb and, 112 (29.2%) of the participants

disagreed that their husband support LAPMs use. Slightly more than one quarter (26.0%) of participants didn't agree that tubal ligation and vasectomy is acceptable. One hundred sixty two (42.3%) of participants disagree that implant and/or IUCD cannot cause irregular bleeding. The mean attitude score was 33.3 (SD ± 6.9) and, 176 (46.0%) of the respondents had unfavorable attitude to use LAPMs (Table 4).

Characteristics	Disagree	Neutral	Agree
	N (%)	N (%)	N (%)
Insertion and removal of implant is not pain full	189(49.3)	85(22.2)	109(28.5)
Using implant and IUCD cannot cause irregular bleeding	162(42.3)	83(21.7)	138(36.0)
Using IUCD and/or implant don't restrict from normal activities/hard work	126(32.9)	56(14.6)	201(52.5)
Insertion of IUCD device doesn't cause lose to privacy	54(14.1)	63(16.4)	266(69.5)
Operation for female/male sterilization(surgical method) is acceptable	100(26.1)	79(20.6)	204(53.3)
IUCD cannot harm womb	185(48.3)	67(17.5)	131(34.2)
Husband support LAPMs use	112(29.8)	59(15.6)	207(54.8)
For me irregular bleeding due to using implant is not severe	137(35.8)	76(19.8)	170(44.4)
For me loosing privacy during IUCD insertion is not shame full	58(15.1)	59(15.4)	266(69.5)
For me by using IUCD devices restricted from different work activity is highly unacceptable	33(8.6)	36(9.4)	314(82.0)

Table 4: Attitude of study participants toward LAPMs and its side effects, Nekemte Town, March, 2015.

One FP service provider said "*Short term contraceptives are the most preferred methods in our facility; clients are not relying on LAPMs. Most of the time, the reasons they mentioned for not using LAPMs, was fear of side effects because of rumors heard from neighbors or relatives.*

The influence of partners especially those partners not presented during counseling on FP methods is also another problem. Most of the clients return to health facility within two weeks after insertion for removals, due to partner opposition."

Myths and misconception about long acting and permanent contraceptives methods

Nearly half (47.8%) of the participants had misconception that implant freely moves in the body and lost at time of removals, 156(40.7%) of participants had heard myths or rumor that implant and/or IUCD cause illness and 248(64.8%) heard myths and misconception about LAPMs of contraceptives in general.

One FP services provider said "*there is misconception and rumor; for users of implant, they think as if it is difficult to carry heavy thing like wood, water. As my understanding utilization of LAPMs depends on how clients are counseled, addressing the problem of misconception which needs great energy, especially on rumors which says IUCD and implants lost in the body and causes illness may improve utilization.*"

Intention to use LAPMs of contraceptives among study participants

The prevalence of intention to use LAPMs was 52.2% (95% CI: 47.2, 57.2). One hundred sixty two (81%) of the participants had intention to use LAPMs within the coming 12 months. Implant was the most (68.5%) preferred participants intended to use followed by IUCD 51(25.5%). Intention to use permanent method was 12(6%), of these only one individual had intention to use vasectomy. Reasons cited by respondents for not intending to use LAPMs were, fear of side effects (45.9%), husband disapproval (31.1%) and fear of infertility after use (10.9%). some clients (2.7%) mentioned that not acceptable in religious and to have more children 11(6.0%).

A 31 years FP provider from one of the facilities said, "*clients were highly preferred to use implants particularly implanon (3 years protection) but they have no interest to use other methods of LAPMs. This indicates ways of our counselling that may not include all option of LAPMs. There is a problem of discontinuation rate due to side effects and partner influence.*"

Factors associated with intention of respondents to use LAPMs of contraceptives

Factors independently associated with intention of respondents to use LAPMs were educational status, attitude toward LAPMs, myths and misconception about LAPMs, misinformation like implants or/and IUCD cause illness and possession of functional television were statistically significantly associated with intention to use LAPMs (Table 5).

Characteristics	Categories	Intention to use LAPMs		COR(95%CI)	AOR(95%CI)	P-value
		Yes, N (%)	No, N (%)			
Educational level	Illiterate	13(20.3)	51(79.7)	1		
	1-8 grade	57(47.5)	63(52.5)	3.549(1.7, 7.2*)	2.6(1.2, 5.8)**	0.02
	9-12 grade	62(60.2)	41(39.8)	5.9(2.9, 12.)*	5.2(2.2, 12.6)**	<0.001
	12+ grade	68(70.8)	28(29.2)	9.6(4.5, 20.2)*	7.6(2.9, 19.7)**	<0.001
Residence	Urban	172(58.7)	121(41.3)	3.2(1.9, 5.2)*	2.1(0.8, 5.9)	0.142

	Rural	28(31.1)	62(68.9)	1		
Partner education	Illiterate	5(23.8)	16(76.2)	1		
	1-8 grade	39(41.5)	55(58.5)	2.3 (0.7, 6.7)	0.7(0.2,2.7)	0.617
	9-12 grade	61(50.8)	59(49.2)	3.3 (1.1, 9.6)*	0.7(0.2,2.7)	0.577
	12+ grade	93(65.0)	50(35.0)	5.9(2.1, 17.2)*	0.9(0.2,4.6)	0.937
Occupation	Housewife	91(46.7)	104(53.3)	1		
	Merchant	32(47.1)	36(52.9)	1.0(0.6, 1.8)	0.7(0.4, 1.5)	0.394
	Employed	51(67.1)	25(32.9)	2.3(1.3, 4.1)*	0.7(0.3, 2.1)	0.543
	Others	26(59.1)	18(40.9)	1.6(0.8, 3.2)	0.9(0.4, 2.4)	0.89
Partner	Farmer	27(36.5)	47(63.5)	1		
occupation	Merchant	29(43.3)	38(56.7)	1.3(0.7, 2.6)	0.4 (0.2, 1.0)	0.06
	Employed	81(60.9)	52(39.1)	2.7(1.5, 4.9)*	0.6 (0.3, 1.3)	0.197
	Others	61(60.4)	40(39.6)	2.6(1.4, 4.9)*	0.9(0.4, 2.1)	0.927
Ethnicity	Oromo	178(56.0)	140(44.4)	1		
	Amhara	19(38.8)	30(61.2)	0.5(0.3, 0.9)*	0.7(0.3, 1.5)	0.326
	Gurage	3(20.0	12(80)	0.2(0.1, 0.7)*	0.5(0.1, 2.6)	0.436
Have function	Yes	128(56.9)	97(43.1)	1		
TV	No	72(45.6)	86(54.4)	0 .6(0.42, 0.96)*	0.55(0.3, 0.9)**	0.035
Have function	Yes	140(57.1)	105(42.9)	1.7(1.2, 2.6)*	1.3(0.7, 2.1)	0.409
radio	No	60(43.5)	78(56.5)	1		
Exposed to FP message	Yes	179(54.7)	148(45.3)	2.0(1.1, 3.6)*	0.8(0.3, 1.9)	0.628
	No	21(37.5)	35(62.5)	1		
Discussed with HEWs/HP LAP.	Yes	164(55.6)	131(44.4)	1.9(1.1, 2.9)*	1.1(0.6, 2.2)	0.73
	No	36(40.9)	52(59.1)	1		
Age at marriage	<18	77(43.3)	101(56.7)	1		
	≥ 18	121(60.5)	79(39.5)	2.0(1.3, 3.0)*	1.2 (0.7, 2.0)	0.427
Discussed with partner on FP	Yes	185(57.3)	138(42.7)	4.0(2.1, 7.8)*	1.6 (0.7, 3.7)	0.252
	No	13(25.0)	39(75.0)	1		
Number of birth	≤ 2	129(54.4)	104(44.6)	1		
	≥ 3	37(40.2)	55(59.8)	0.5(0. 3, 0.9)*	0.9(0.4, 2.1)	0.791
Age at first delivery	<18	23(35.9)	41(64.1)	1		
	≥ 18	143(54.8)	118(45.2)	2.2(1.2, 3.8)*	1.3(0.5,2.9)	0.566
Who decide number of children	Husband	16(34.8)	30(65.2)	1		
	Wife	4(20.0)	16(80.0)	0.5(0.1, 1.6)	0.3(0.1, 1.2)	0.077
	Both	178(57.1)	134(42.9)	2.5(1.3, 4.8)*	1.5(0.7, 3.3)	0.319
Implant moves freely and lost	Yes	73(39.9)	110(60.1)	1		

	No	127(63.5)	73(36.5)	2.6(1.7, 4.0)*	1.4(0.8, 2.3)	0.213
LARC cause illness	Yes	52(33.3)	104(66.7)	1		
	No	148(65.2)	79(34.8)	3.8(2.4, 5.8)*	2.0(1.2, 3.5)**	0.015
Myths on LAPMs heard	Yes	104(41.9)	144(58.1)	1		
	No	96(71.1)	39(28.9)	3.4(2.2, 5.3)*	2.1(1.2, 3.6)**	0.012
Knowledge level on LAPMs	Low	44(43.6)	57(56.4)	1		
	Moderate	30(39.0)	47(61.0)	0.8(0.5, 1.5)	0.8(0.4, 1.6)	0.58
	High	126(61.5)	79(38.5)	2.1(1.3, 3.4)*	1.4(0.8, 2.4)	0.268
Attitude toward	Negative	65(36.9)	111(63.1)	1		
LAPMs	Positive	135(65.2)	72(34.8)	3.2(2.1, 4.9)*	2.1(1.3, 3.4)**	0.005
*Significant in COR at p-value <0.25, **significant in AOR at p-value <0.05						

Table 5: Multivariable logistic regression analysis on factors affecting intention to use LAPMs of contraceptives among respondents in Nekemte Town, (n=383), March, 2015.

The results of multivariate logistic regression analysis show that women who attained primary education were 2.6 times more likely to have intention of LAPM use compared to uneducated (AOR=2.6; 95% CI: 1.2, 5.8) one, women who attended secondary education were five times (AOR=5.2; 95% CI: 2.2, 12.6) more likely to have intention to use LAPMs compared to uneducated women. Women who attended higher education were 7.6 times (AOR=7.6; 95% CI: 2.9, 19.7) more likely to have intention to use LAPMs compared to uneducated women.

Moreover, women who had positive attitude were found to be two times more likely to have intention to use LAPMs compared to women who had negative attitude towards LAPMs (AOR=2.1; 95% CI :1.3, 3.4). Furthermore, women who understand that IUCD and/ or implants don't cause illness were two times more likely to have intention to use LAPMs compared to those who perceived that IUCD and/or implant cause illness (AOR=2.0; 95% CI: 1.2, 3.5). There was significant positive association of intention to use LAPMs among women who had no myths and misconception about LAPMs (AOR=2.1; 95% CI: 1.2, 3.6) compared to women who had myths and misconception about LAPMs. Those who did not functional television were 45% less likely to have intention to use LAPMs compared to those who have functional television (AOR=0.55; 95% CI: 0.32-0.96) (Table 5).

Discussion

The prevalence of intention to use LAPMs in this study was 52.2%. This finding is in line with study conducted in Mekelle Town, northern Ethiopia (53.5%) [13], But it is higher than finding in Wolaita zone, southern Ethiopia (38%) [14], and Goba Town, south east Ethiopia (28.3%) [15], and lower than study conducted in Jinka town, southern Ethiopia (68%) [16]. This discrepancy could be explained by difference in study setting and prevailing conditions in the particular study setting, including cultural variations.

The results of this study showed that high proportion of respondents had awareness about implants and IUCD; but, low awareness on permanent methods. This finding is in line with study conducted in Adigrat Town, North Ethiopia [12] that showed knowledge of implants was (94.2%), IUCD(84%), tubal ligation (49.7%) and Rwanda [17], where over 95% of participants knew implants, but higher than finding of Butajira south central Ethiopia [18] that showed knowledge of tubal ligation (19%), Vasectomy (8.2%), implants (74.4%) and IUCD(13.1%). This difference could be due to repeated promotions or advertisements of these methods by different organization over a period of time.

According to the present study, women who had supportive attitude were found to be two times more likely to have intention to use LAPMs. This finding is comparable with study conducted in Wolaita zone Southern Ethiopia [14], in which women who had a positive attitude were found to be 2.5 times more intention to use LAPMs and Arba Minch Town, Southern Ethiopia [19] that showed mothers who had positive attitudes towards LARC were 3 times more likely to utilize than those who had negative attitudes.

The intention to use LAPMs among the study participants shows positive increment with level of their schooling. This finding is in agreement with the study conducted in Kelala Town, North Ethiopia [20], Pakistan [21], Rwanda [17], Iran [22], Sudan [23] and Malawi [24]. This could be due to the fact that educated women can acquire more information from different sources such as written materials; internet and educated women can also more easily approach FP service providers.

Significant numbers (64.8%) of women had myths and misconception regarding the use LAPMs. This finding is comparable to the finding of Wolaita zone (67.2%) [14], Pakistan [21] that indicated women who had no myths and misconceptions on LAPMs were found to had more intention to use LAPMs, and Kenya [25], where a number of participants cited fear of methods shift or expulsion in relation to implants and IUCD, Jinka town Southern Ethiopia [16] and Sudan [23], that many participants raised misconception about IUCD during heavy work.

One hundred fifty six (40.7%) of participants perceived that IUCD and/or implant cause illness, which is significantly associated with their intention to use LAPMs. This is comparable with study conducted in Nigeria [26], that indicated there was wide spread of

belief that the IUCD makes the user more prone to sexually transmitted infection (STI) and infection of the pelvis. This could be due to presence of rumors regarding to LAPMs.

In present study those respondents who had no functional television were 45% less likely to have intention to use LAPMs compared to those who had functional television, which is comparable with study conducted in Arba Minch town in Southern Ethiopia [19] where strong predictor of long acting contraceptives utilization was the possession of functional radio/or television. This might be due the fact that study participants' one main source of information about FP methods is mass media, suggesting the need for potential use of it for scaling up the LAPMs.

All most all FP service providers interviewed raised high discontinuation rate of LAPMs; the major reasons mentioned for the discontinuation were side effects (bleeding), partner's influence, myths and misconception from neighbors and community. These results are in agreement with the findings of a study conducted in Pakistan [27] that revealed 19.4% of the women discontinued use of their IUCD at 10 months and of these women, the majority (69.4%) cited side effect was the main reason for discontinuation. This could be due to inadequate counselling before insertion of these methods on possible side effects.

The main reason for some (31%) of the respondents for the lack of intention to use LAPMs was due to partner's opposition. This finding is in agreement with finding in Kelala town North Ethiopia [20] that showed reasons reported by women who were not using contraceptives were partner dis-approvals. The possible reason might be due to the male dominance as most of the decisions are made by husbands including reproductive health matters.

In present study, one-third of participants believed that IUCD and/or implants restrict from normal activities or hard work, and 48% of participants had fear that IUCD can harm women womb, which is in line with study in Pakistan [27] in which the account for low uptake of IUCD was due to fear of FP methods to harm a woman's womb.

Although husband play an important role in realization of reproductive goals, no any information was obtained from husband sides about LAPMs and knowledge and attitude of partners to ward LAPMs and support to wives concerning LAPMs use was also not assessed which may also affect intention of women to use LAPMs.

In conclusion, intention to use LAPMs of contraceptives in Nekemte Town was low and significant proportion of FP clients had negative attitude to have intention to use LAPMs. Some of the factors mentioned for not intending to use LAPMs were fear of side effects, husband disapproval, and fear of infertility after use which is resulted from high prevalence of myths and misconception about LAPMs in the community. Majority of women had high knowledge concerning LAPMs except that of permanent methods. The low intention to use LAPMs mostly related to non-supportive attitude, presence of myths and misconception, not having educations and lack of functional television. Attainment of education, having supportive attitude toward LAPMs, had no myths and misconception about LAPMs and possession of functional television were positively and significantly associated with intention to use LAPMs. Health care providers were major source of FP message for clients but there is some gab on permanent methods, which shows counselling gap on LAPMs.

Therefore, Nekemte Town Health Office, Oromia Regional Health Bureau and all non-governmental organization working on LAPMs services should continue advertising of LAPMs. Nekemte Town Health Office, all health facilities providing FP services in the Town should design appropriate social and behavioral change communication program especially at community level to address problems of rumors, myths and misconception on LAPMs. Health service providers, health Extension Workers (community Health workers) should strengthen awareness raising activities on LAPMs, and Behavioral change communication should address factors hindering intention of clients to use LAPMs. FP providers should counsel on all option of contraceptives based on client reproductive needs. Emphasize should be given to uneducated mothers and involvement and support of male's partners during visit for FP service.

Declaration

Authors' contributions

GH involved in conception, designing methods, analysis, interpretation and drafting of the manuscript. LS, DH and HM Participated in designing, data analysis, interpretation of the findings and write up of the findings

Competing Interests

The authors declare that they have no competing interests.

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