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Women's intention to use long acting and permanent contraceptive methods and associated factors among family planning users in Addis Ababa, Ethiopia: A Cross sectional study

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Abstract

The main objective of the study was to assess the magnitude of women's intention to use long-acting and permanent contraceptive methods and associated factors among short term family planning users in Addis Ababa public health centers, Ethiopia, 2020. A Facility-based cross-sectional study design was implemented in Addis Ababa public health center and data was collected using a pretested structured questionnaire on 504 participants, which was selected by multistage cluster sampling methods among family planning users in selected public health centers from March to April 2020. Collected data were coded and entered into EPI INFO version 4.6.0.0 and exported to SPSS version 25.0 for analysis. Multivariate logistic regression model was used to determine independent predictors at a 95% confidence interval and p<0.05 was considered significant. This study found the prevalence of contraception intention to use long acting and permanent methods (LAPMs) among participants were 60%. Predictors of LAPM desired number of children (AOR: 14.55, 95%CI (3.29-6.42), respondent's education (AOR: 0.36, 95%CI (0.20-0.64) and participant's occupation status (AOR: 8.75, 95% C I (1.31-5.84) were significantly associated with contraception intention. *(Afr J Reprod Health 2022; 26[4]: 22-31).*

Keywords: Contraception; plan; long acting; everlasting; public

Résumé

Les principaux objectifs de l'étude étaient d'évaluer l'ampleur de l'intention des femmes d'utiliser des méthodes contraceptives à longue durée d'action et permanentes et les facteurs associés parmi les utilisatrices de la planification familiale à court terme dans les centres de santé publics d'Addis-Abeba, Éthiopie, 2020. la conception de l'étude a été mise en œuvre dans le centre de santé publique d'Addis-Abeba et les données ont été collectées à l'aide d'un questionnaire structuré prétesté sur 504 participants, qui a été sélectionné par des méthodes d'échantillonnage en grappes à plusieurs étapes parmi les utilisateurs de la planification familiale dans certains centres de santé publique de mars à avril 2020. Les données collectées ont été codées et saisies dans EPI INFO version 4.6.0.0 et exportées vers SPSS version 25.0 pour analyse. Le modèle de régression logistique multivariée utilisé pour déterminer les prédicteurs indépendants à un intervalle de confiance de 95 % et p<0,05 a été considéré comme significatif. Cette étude a révélé que la prévalence de l'intention de contraception d'utiliser des méthodes à longue durée d'action et permanentes (LAPM) parmi les participants était de 60 %. Prédicteurs du nombre d'enfants souhaités par LAPM (AOR : 14,55, IC à 95 % (3,29-6,42), de l'éducation des répondants (AOR : 0,36, IC à 95 % (0,20-0,64) et du statut professionnel des participants (AOR : 8,75, IC à 95 % (1,31 -5,84) étaient significativement associés à l'intention de contraception. *(Afr J Reprod Health 2022; 26[4]: 22-31).*

Mots-clés: Contraception; plan; longue durée d'action; éternel; Publique

Introduction

Population growth is a major concern in developing countries because of its impact on broader socio-economic development. Family planning is a process that involves a discussion and decisions between couples and trained health care provider focusing on family health and their desires of either limiting or spacing their family size[1]. Family Planning methods can be classified into natural and modern methods that modern methods further classified into long term methods which include long-acting and permanent methods (intrauterine devices, implants, and sterilization), and short-term methods (pills, condoms, spermicides, injectable, other modern methods, and all traditional methods)[2]. Intention is a mental state that represents a commitment to carrying out an action in the future

and involves mental activities such as planning and forethought. A mental mechanism, including intention, explain behavior in those individuals are seen as actors who have desires and who attempt to achieve goals that are directed by beliefs. Thus, an intentional action is a function to accomplish a desired goal and is based on the belief that the course of action will satisfy a desire[3]. The health sector transformation plan (HSTP) gives top priority for reproductive, maternal, newborn, child and adolescent health. As indicated in the sustainable development goals Ethiopia will intensify these health care interventions to end preventable maternal and child deaths. The targets set in the HSTP are to reduce maternal mortality ratio(MMR) from 420 to 199 per 100,000 live births(LB), Neonatal Mortality from 27 to 9.73, per 1,000 LB and infant mortality from 46.4 to 19.33 per 1,000 LB in 2020 [4]. Modern FP services in Ethiopia were pioneered by the Family Guidance Association of Ethiopia (FGAE), which was established in 1966. FGAE's first FP services were provided from a single-room clinic run by one nurse. Following Ethiopia's adopt a Population Policy in 1993, local and international institutions partnered with the government in expanding FP programs and services[5]. Access to high-quality sexual and reproductive health services and information, including a full range of contraceptive methods, is fundamental to realizing the rights and well-being of women and girls. Universal access to effective contraception ensures that all persons should avoid adverse health and socioeconomic consequences of unintended pregnancy and have a satisfying sexual life[6]. Couples who want safe and effective protection against pregnancy and from its complications would benefit from access to more contraceptive methods, including LAMPs[7]. Factors contributing to high fertility include low socio-economic development, deeply held cultural values for large family size, negative attitude towards contraception and low levels of contraception usage in the community[8].

Nowadays, more than 500 million women in the developing regions are using some form of contraceptive methods and preventing 187 million unintended pregnancies, 60 million unplanned births, 105 million induced abortions, 2.7 million infant deaths, 215,000 maternal deaths. However, another 200 million women who want to delay or limit their births lack access to contraceptives. Providing these women with the services they want could prevent an additional 52 million unintended pregnancies and 23 million unplanned births each year[9].

Ethiopia is the twelfth and second most populous nation in the world and Africa respectively and the total fertility rate (TFR) is 4.6 and contraceptive prevalence rate (CPR) is 36% and an unmet need FP is 22%[8,10]. Since unintended pregnancies remain as common the method of contraception must be prepared to meet the needs of individuals who faced these type of obstacles that utilizations of LAPMs remain small and sometimes missing component of national Family Planning program and it can enhance FP programs in meaningful ways if the challenges to their availability, access, and acceptability can be overcome appropriately[11]. Ethiopian federal ministry of health (EFMOH) has made unreserved efforts to expand access to FP information and a range of FP method options over the last decade by increasing access to FP services through its Health Extension Program, providing information and utilization by integrating with other services and gives special training for providers on LAPMs[7]. Utilization of FP in Ethiopia is dominated by short-term methods such as pills and injectable but that of LAPMs is very low. Despite the advantages of LAPMs, utilization remain small, and sometimes missing component of many national reproductive health and FP programs it has not kept pace with that of short-acting methods[10].

A given behavior is more likely to occur if the intention to practice is strong, no environmental barriers to performing it, and individual has the skills and ability to perform the behavior. Intention to use a method of contraception is an important indicator of the potential utilization for FP services of an individual as studied[10,12]. As a justification despite the availability and services of LAPMs are given in all institutions, its utilization is very low including study area. In addition, Ethiopia has still a long way to go to fertility reduction and raise the contraceptive prevalence rate to fulfill the target. Even though modern contraceptive services are made accessible nearly at all essential areas in Ethiopia and mostly at lower or no cost, the

utilization and intention to use LAPMs are very low. Since there is limited, study conducted in Addis Ababa on intention to use LAPMs and its factors this study identified specifically on family planning users in the city.

Methods

The study was conducted in Addis Ababa city administration government health centers from March to April 2020. Addis Ababa is the capital city of Ethiopia and the area covered about 526.99km^2. According to the 2007 census, it has a population of 2,738,248 of which 1,304,518 are males and 1,433,730 are females that make the proportion of male and female 49% and 51.0% respectively with an annual growth rate of 2.1%. An institution-based cross-sectional study design was implemented. Among females, 34.8% of women in reproductive age are living in Addis Ababa and 28.4% of them are contraceptive acceptors.

All women who were short-term family planning users in Addis Ababa and randomly selected women from short-term family planning users in Addis Ababa public health centers were source population and study population respectively. Randomly selected women of 18-49 years who were short-term family planning users, who lived in Addis Ababa at least for 6 months in Addis Ababa were included in the study and women who were severely ill and mentally incompetent with the context of the questionnaire were excluded from the study.

The sample size (n) was determined based on a single population proportion formula with the following assumptions. From the previous study conducted in Wollega western Ethiopia, the proportion of intention to use LAPMs was taken as 18.2%[16], margin of error (d) 5% and 95% confidence interval. By considering 10 % non-response rate and lost questionnaire and the design effect 2 the total sample size was 504.

Multi-stage cluster sampling technique was used to select study participants. To take study participants from all sub-city were impossible due to lack of resources, lack of time and incontinency to cover all, so three sub-cities was selected using a simple random sampling method from ten sub-cities found in Addis Ababa city administration, then 7 health centers was also select from each selected sub-cities using simple random sampling according to the number of health centers with in the sub-city. The sample size for each health center was determined by taking the average number of clients who were served for the previous three months before the survey and allocated to each health center by probability proportional to size based on daily client flow. The first respondent from each health centers was selected by systematic sampling method from Kth respondents randomly then subsequent respondents was selected every Kth where k=N/n =1239/504=2.4 (N is the total population and n is sample size) every 2nd of the daily short term FP user flow until the required respondents was gained within four weeks of working days.

Data collection instrument

The questionnaire was prepared originally in English and then translated to Amharic and back to English to check the consistency. Data was collected by using a pretested structured Amharic version interview administered questionnaire that was adopted from related studies[14-15.] The questionnaire includes 53 questions in to five parts. It includes socio-demographic characteristics, reproductive history, knowledge on LAPMs, attitude on LAPMs, previous exposure and intention to use LAPMs. Data on knowledge LAPMs contraceptive variables was collected in two ways. First, respondents were asked to mention all what they know and heard spontaneously. For the responses not mentioned spontaneously, the interviewer described for whether the respondent recognized it.

Data quality assurance

To assure the quality of data, authors review filled questionnaires on a daily bases and pretest was conducted on women who were short-term family planning users in another health center. The pretested 10% of the data was verified during the initial stage of data collection and appropriate instruction was given.

Data processing and analysis

All data was summarized, coded and fed to computers to make them ready for analysis. Data

was entered into EPI INFO version 4.6.0.0 statistical software package for cleaning and correcting inconsistency of data and exported to SPSS version 25.0 for analysis. Multivariate logistic regression was used to identify the relative importance of each predictor to the dependent variable by controlling for the effects of other variables and $p<0.05$ at 95%CI was considered for significance.

Results

Socio-demographic characteristics of participants

A total of 480 short-term family planning users were interviewed and makes the response rate 95%. The mean age of respondents were 29(±6 SD) and minimum and maximum age were 18 and 44 years respectively. The median incomes of participants were 5000 Ethiopian birr (ETB) which ranges from1000 to18000 ETB (Table: 1)

Table 1: Socio-demographic characteristics of family planning users

Variables	Frequency	Percentage
Age n=480		
15-19	21	4.4
20-24	104	21.7
25-29	144	30
30-34	110	22.9
35-39	71	14.8
40-44	30	6.3
Marital status n=480		
Single	83	17.3
married	348	72.5
Widowed	24	5
divorced	25	5.2
Educational level n=480		
Cannot read and write	21	4.4
Primary(1-8)	52	10.8
Secondary and preparatory(9-12)	105	21.9
Diploma and above	302	62.9
Partners educational level n=398		
Cannot read and write	8	2
Primary(1-8)	44	11
Secondary and preparatory(9-12)	125	31.4
Diploma and above	221	55.5
Family size		
1-2	113	23.5
3-4	238	49.6
>/+5	129	26.9
Respondents occupation n=480		
House wife	135	28.2
Government employ	235	49
Private employ	97	20.2
Daily laborer	5	1
Student	8	1.7
Partners occupation n=398		
Government employ	114	28.6
Private employ	245	61.4
Daily laborer	32	8
Farmer	8	2

Reproductive characteristics of participants

From married participants 20(5%) them were married before 19 years old, 26(6.5%) of participants were never give birth and from participants who gave birth 10(2.7%) had gave birth before 18 years old. Two hundred thirty seven (63.8%) of respondents had 1-2 number of children's From the total number of participants 314(65.4%) did not want more child within the next 2 years; of them 151(48%) not want to space and 115(36.6%) was to limit. The mean of respondents ideal desired number of births were 3.59 (+1.1 SD) with minimum1 and maximum 7 children's with 325(67.7%) want to have 3-4 births in their life. Of the total number of married participants 345(71.9%) said they were discussed with her husbands about family planning. In 237(49.4%) of respondents the decision on the number of children to have was decided jointly by the husband and wife.

Knowledge on long acting and permanent method characteristics of participants

Three hundred eight four (80%) of the participants reported that they have exposure to LAPMs message. Of them more than half (82%) of the participants explained that their first information was from health institution followed by mass media 253 (65.8%) and friend 135(35.1%). From the total participants of the study, 341(71%) know (had information) at least one method of LAPMs, of them 339(99.4%) and 336(98.5%) knows implant and IUCD as LAPMs respectively. About 77% of the respondents said, that LAPMs can prevent unwanted pregnancy and 204 (59.8%) said LAPMs can prevent child and maternal death.

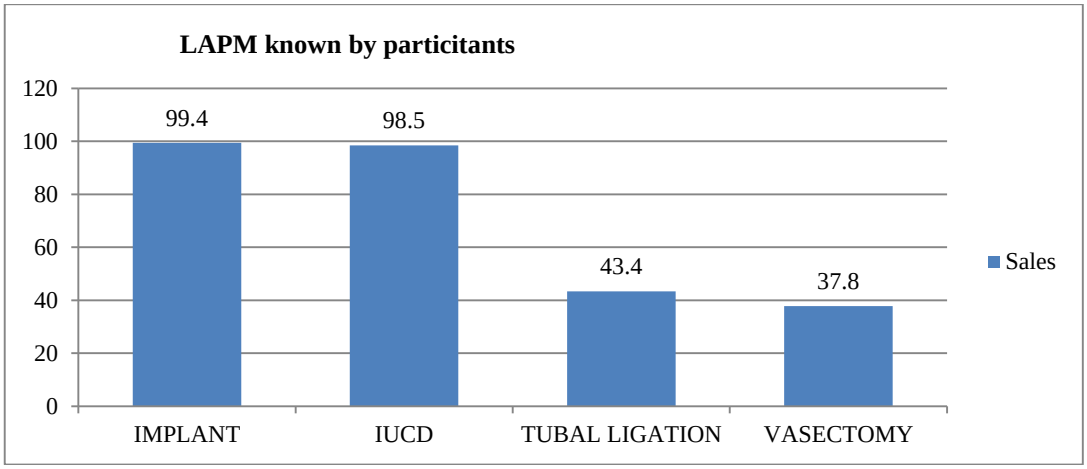

Figure 1: LAPM known by family planning users in Addis Ababa public health centers

Table 2: Knowledge about distinct characteristics of LAPM among family planning users

Variable	Know/yes N (%)	Knowledge level		
		Poor	Good	V. good
*Charactestics of IUCD n=336		35(10.4)	112(33.3)	189(56.3)
It is effective	191(56.8)			
Long term up to 12 years	270(80.4)			
No effect on BF	152(45.2)			
Not good for female with risk of STD	135(40.1)			
No interference with sexual intercourse	156(46.4)			
Immediately reversible	206(61.3)			
Has minimal side effect	172(51.2)			
*Characteristics of implant n=339		44(4.1)	96(28.3)	229(67.6)
It is effective	241(71%)			
Long term up to 5 years	290(85.5)			
No effect on BF	212(62.5)			
Insertion and removal requires simple procedure	183)54)			
No effect on daily activity	184(54.3)			
Immediately reversible	249(73.4)			
Had minimal side effect	205(60.5)			
***Characteristics of vasectomy n=129**		45(34.9)	49(34.8)	35(27.1)
It is effective	40(31)			
Permanent	79(61.2)			
Require simple and safe procedure	31(24)			
No repeat clinic visit	51(39.5)			
No effect on sexual intercourse	43(33.3)			
No side effect	47(36.4)			
Needs consent	34(26.3)			

Key**: ***multiple choice

Knowledge on distinct characteristics of LAPMs

Among the respondents who reveals implant as LAPMs, 290(85.5%) stated that it is long term contraceptive. The knowledge level of implants was very good in 229(67.6%) of the participants and 44(4.4%) had poor knowledge (Figure 1). Of the total participants who knows IUCD as LAPMs, 270(80.4%) of the participants know that IUCD is long term, and 206(61.3%) of them knows after removal pregnancy can occurs immediately. More than fifty percent of participates do not know that IUCD has no effect on breast feeding and sexual

intercourse. About fifty-six (56.3%) had very good knowledge, 112 (33.3%) good knowledge and the rest 35(10.4%) had poor knowledge level regarding with IUCD. Of those participants who mentioned vasectomy as LAPMs,79(61.2%) said that it is permanent, and more than half of respondents do not know that vasectomy is effective, require simple and safe procedure, no effect on sexual intercourse. Nearly half of respondents had good knowledge of vasectomy and less than one third had very good knowledge score (Table 2).

Attitudes of participants about LAPMs

Exactly half of participants agree that they support using LAPMs and two hundred sixty respondents agree using LAPMs contraceptives are good rather only 52(10.8) were disagree. More than half (55.8%) strongly agree that child spacing and limiting protects mothers and child's death (Table 3). The mean of participant's attitude towards LAPMs were M±SD (35.5±5.4). Overall 44.7% of participants showed negative attitude towards LAPMs.

Participant's previous exposure to LAPMs

Among the total participants 175(36.5%) were ever used long acting contraceptive methods, of them implant was the most commonly used long acting contraceptives (76%). Three forth of respondents got the service from government institutions while 20(11.4%) got the service from private institution (Table 4).

Reasons not ever used

Of those who did not ever use long acting permanent methods, nearly half said that it is due to fear of side effect, (35.7%) to get pregnant and lack of knowledge take accounts (21.9%) as shown Figure 2.

Intentions to use and reasons not to use LAPMs

The prevalence of intention to use LAPMs was 60%. The most preferred method participants intend to use in the future was implants which account 175(60.8%), followed by IUCD 106(36.8%), tubal ligation7(2.4%) and no any participants intend to use vasectomy. Participants stated that main reasons for not intending to use LAPMs in the next 2 years were fear of side effect (55.5%), wants to get pregnant 89(46.4%), partner condemnation 65(33.9%) and cultural taboo 53(27.6%), religious believe consider as sinful act 49(25.5%), and lack of knowledge 21(10.9%). Lack of access, fear of infertility and infecundity due to age were least reasons not to have intention.

Factors affecting contraception intention to use

The relationship between variables and intention to use contraception was analyzed using binary and multiple logistic regression. Those variables with p-value <0.25 in the bi-variate analysis were entered in to multiple logistic regression analysis to examine the effect of independent variable on intention to use contraception while controlling other independent variable that predictors of contraception desired number of children(AOR:14.55,95% (3.29-6.42) respondents educational level(AOR: 0.36,95 %CI: 0.20-0.64), respondents occupational status(AOR: 8.75, 95 %CI: 1.31-5.82), past use of contraception (AOR:2.26,95%CI:1.31-3.91), information about LAPM (AOR:2.89,95% CI:1.33-6.29) and respondents attitude (AOR: 2.14, 95% CI: 1.33-3.43)were all significantly associated with intention to use contraception (p <0.05). Respondents with secondary and preparatory educational level have lower intention to use contraception as compared to diploma and above educational status (AOR: 0.36,95 %CI: 0.20-0.64). Past users of contraception were 2 times more likely to have intention to use LAPM in the next 2 years as compared to those who did not use previously(AOR:2.26,95%CI:1.31-3.91). Respondents who had information of long acting and permanent methods were 3 times more likely have intention to use contraception than their counterparts (AOR:2.89,95% CI:1.33-6.29). Those short term family planning users who had positive attitude towards LAPM were 2 times more likely intends to use contraception than those who had negative attitudes (AOR: 2.14, 95% CI: 1.33-3.43). Participants who want 3-4 desired number of children had 15 times more likely to have intention to use LAPMs than those who had ≥5 number of children's (AOR:2.89,95% CI:3.29-6.42).

Table 3: Participants attitude towards LAPMs among family planning users

LAPM attitude statements	Level of agreement				
	S. agree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	S.Disagree N (%)
Discussing about LAPMs with husband or friends is important.	140(29.2)	250(52.1)	58(12.1)	28(5.8)	4(1)
I support using LAPMs	124(25)	240(50)	62(12.9)	52(10.8)	2(.4)
using LAPMs contraception is good	135(28.1)	216(45)	84(17.5)	44(9.2)	1(.2)
Husbands should support using LAPMs.	115(24)	186(38.8)	116(24.2)	57(11.9	6(1.3)
Using LAPMs not restricts daily activity.	149(31)	190(39.6)	96(20)	42(8.8)	3(.6)
Using LAPMs not affect women's health.	76(15.8)	229(47.7)	101(21)	71(15)	2(0.2)
Husband /friend are responsible to using LAPMs.	153(31.9)	152(31.7)	64(13.3)	93(19.4)	18(3.8)
Large family size negatively affects economic conditions.	206(42.9)	229(47.7)	23(4.8)	19(4)	3(0.6)
Child spacing and limiting protects mothers and child death.	268(55.8)	173(36)	22(4.6)	15(3.1)	2(0.4)

Key: S-Strongly, LAPMs-long acting and permanent methods

Table 4: Participants previous exposure towards LAPMs among family planning users

Variables	Number (%)
Every used LAPMs n=480	
Yes	175(36.5)
No	305(63.5)
Type of methods n=175	
Implant	133(76)
IUCD	42(24)
Length of using LAPMs in year n=175	
1-4	137(78.3)
5-8	31(17.7)
9-12	7(4)
Shift one method to another n=175	
Yes	122(69.7)
No	53(30.3)
*Reasons to shift a method n=122	
Partner influence	51(41.8)
Provider influence	53(43.4)
Need of long term	76(62.3)
Side effect	46(37.7)
Lack of access	2(1.6)
Convenience of new method	37(30.3)
Inconvenience of previous method	21(17.2)

Key: *****multiple choice

Respondents with government employee has 9 times more likely to have intention to use long acting and permanent methods than their counterparts (AOR: 8.75, 95 %CI: 1.31-5.82) Table 5).

Discussion

More than half of participants (60%) had contraception intention in the future, which was higher than study in Wollega, Adigrat and Woliata[14-16]. This may due to the fact that the current studies being among clients of other modern contraceptive methods while the study in Wollega and Adigrat was among all contraceptive users and non-users while in woliata they used institution based crossectional which is similar to this study.

Participants who heard about LAPMs; more than three-fourth (82%) of them mentioned that their first information was from health institution followed by mass media (65.8%) and friend (35.1%). This result was in line with studies done in Gondar town in which their main sources of information about LAPM were health professionals (82.6%), television programs (47.3%), and the radio 40.1%(17). Among respondents with knowledge on LAPMs, those who had very good knowledge were (56.3%), (67.6%), (27.1%) and (43.2%) for IUCD, Implant, Vasectomy and tubal ligation which was comparable with other studies in Adigrat where 51.1%, 59%, 66.7% and 80.5% had very good knowledge on IUCD, Implant, vasectomy and tubal ligation respectively[15].

Participant's occupation had statistically significant with positive effect on intention to use LAPMs. Participants who were government employee were 9 times more likely to have intention to use LAPMs compared to other occupation which is in line with study done in wollega[16]. The possible reason could be those employed women who were government employee may be more educated and they may have good awareness regarding to LAPMs. Study participants who had history of LAPMs use had 2.26 times more likely to have

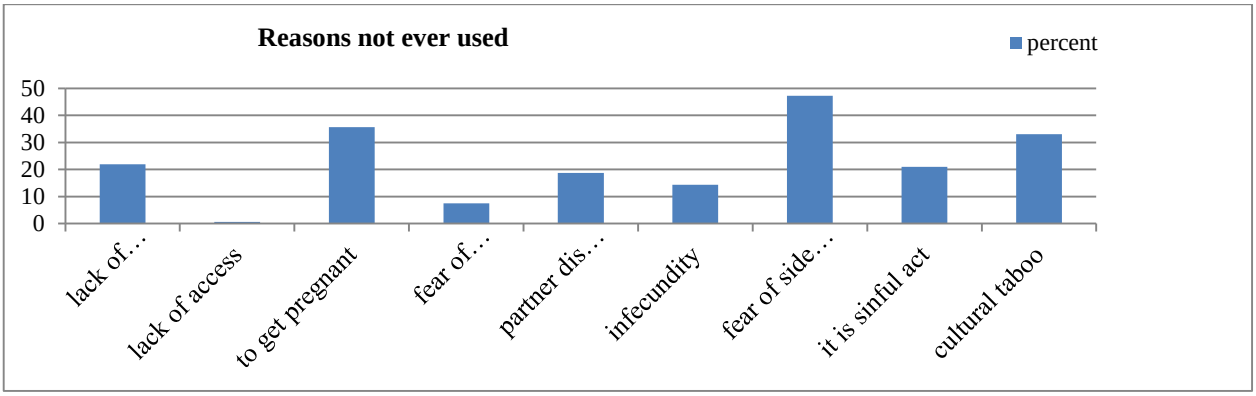

Figure 2: Reasons for not ever using LAPMs among family planning users

Table 5: Binary and multiple logistic regression analysis and contraception intention among family planning users

Variables		Contraception Intention		95%CI(COR)	95%CI(AOR)
		Yes	No		
Educational level					
Can't read and write		7	14	0.23(0.09-0.60)	0.66(0.21-2.06)
Primary education		31	21	0.69(0.38-1.29)	0.53(0.24-1.15)
Secondary and preparatory		41	60	0.35(0.22-0.56)	0.36(0.20-0.64)*
Diploma and above		205	97	1	1
Past users of LAPMs	Yes	138	37	3.85(2.51-5.90)	2.26(1.31-3.91)*
	No	150	155	1	1
Desired children	1-2	208	139	6.98(1.97-2.47)	12.35(2.94- 5.18)
	3-4	77	39	9.21(2.49-3.39)	14.55(3.29-6.42)*
	>/=5	3	14	1	1
Attitude	Positive	196	67	3.97(2.70-5.85)	2.14(1.33-3.43)*
	Negative	99	125	1	1
Ever heard of LAPM	Yes	234	96	4.3(2.87-6.52)	2.89(1.33-6.29)*
	No	54	96	1	1
Occupation	House wife	57	78	2.19(0.42-11.26)	2.17(0.31-1.48)
	Government employ	178	57	9.36(1.83-47.71)	8.75(1.31-5.84)*
	Private employ	49	48	3.06(0.58-15.93)	3.31(0.47-2.30)
	Daily labor	2	3	2.00(0.18-2.21)	1.14(0.069-1.89)
	Student	2	6	1	1

Key: LAPM: long acting and permanent methods CI; confidence interval, AOR; Adjusted odds Ratio, COR; Crude odds ratio; Crude ORs reflect bivariate results

intention than who did not have intention and this result is comparable with the study done in Gondar[17]. The main reasons for not intending to use LAPMs were fear of side effect, to get pregnant, partner disapproval and cultural taboo. This reasons were in line with study conducted in Ghana that said common reasons cited for not using contraception after delivery were desire to get pregnant at that time, previous experience of method-related side effects, partner disapproval and religious beliefs[18]. Respondents who want to use LAPMs in the future were intended to use Implant, IUCD and tubal ligation that was comparable with the findings in Adigrat respectively[14]. The participants' who knows or recognize at least one method of LAPMs has 3 times significant positive impact on intention to use LAPMs in the future. Similarly, this was significantly associated in the study done in studies in Adigrat and wolaita town[14,15].

Women with lower ideal desired number of children had high intention to use LAPMs. This could be due to fear of participants fertility return after the use of long acting methods and study in Pakistan indicated that intention to use contraceptive methods were higher among women with four or more children[19]. In this study

participants who had positive attitude hade significant association with intention to us LAPMs in the next 2 years. This result was in line with a study conducted in wolaita on similar study participants; which shows those who had a positive attitude were 2.5 times more likely to have the intention to use LAPMs compared to women who had a negative attitude[15]. From the participants who had knowledge on IUCD and implant, 56.8% and 71 % of them know that they are effective reversible long acting methods respectively. This result was almost similar with a study conducted in Kampala Uganda shows that the knowledge of study participants on effectiveness IUCD and implant was 68.5%, and 69.9% respectively[20].

In this study participants had very good knowledge on IUCD (56.3%), implant (67.6%), tubal ligation(43.2%) and vasectomy (27.1%).This result was almost in line with a study done in Ghana which shows Knowledge on long-acting reversible contraceptives (implants 67.6% and intrauterine device 56.6 %) or permanent methods (female 56.3% and male sterilization 33.2%)[18]. Results in this study shows that future intention to use LAPMs depends on desire number of children, previous and current contraceptive usage. Similarly, an analytical cross-sectional study done in Ghana indicated that discussing FP with one's partner, previous contraceptive use and desire number of children were predictive of clients' intention to use contraception in the future[18]. About 71% participants were mentioned or knew at least one of LAPMs, which is similar with the study conducted in Debremarko's town, implies that more than three-fourth of respondents (81.5%) knew/mentioned at least one LAPMs and (18.5%) did not know any LAPMs[21]. This may be due to similarity of study population characteristics.

Ethical approval

Ethical approval of the research was obtained from the Institutional Review Board (IRB) and participants were informed that participation is voluntarily, they have full right to refuse from participation or withdraw from the study at any time they want, without losing any of their right not forced to stay in study and individual confidentiality was secured. Detailed explanation about the objective and benefit of the study was described to the study population and their full cooperation, and written consent was taken by declaration of Helsinki.

Conclusion

The study identified that the magnitude of intention to use LAPMs in the study area was 60.0% and information on LAPMs, desired number of children, previous use of LAPMs, educational level of respondents, occupation status and attitude towards LAPMs were identified to be predictors of contraception intention in the study area. As a recommendation, educational programs should design to create awareness and reduce predictors identified through this study in the study area.

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Contribution of authors

BD conceived and designed the study. BD, MA and JT collected and analyzed the data. BD MA and JT interpreted the data. JT prepared the manuscript. BD and MA revised it critically for intellectual content**.** All authors read and approved the final manuscript.

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