

Knowledge, Attitude and Factors Associated with the Use of Long Acting and Permanent Contraceptive Methods among Women of Reproductive Age in Gesuba Town, Southern Ethiopia

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Abstract

Background: Population growth is a major concern in developing countries in view of its impact on broader socio-economic development. Ethiopia like most countries in sub-Saharan Africa is experiencing rapid population growth with a rate of 3%. Thus, utilization of long acting and permanent methods positively influence socio-economic development of a nation by allowing families to space and limit their family size to their economic capacity.

This study was aimed to assess knowledge; attitude and factors associated with the use of long acting and permanent contraceptive methods (LAPMs) among reproductive age group women in Gesuba town, southern Ethiopia.

Methods: Community based cross-sectional study was conducted from November 20 to December 27- 2014, in Gesuba town, Wolaita Zone, Southern Ethiopia. A total of 375 study subjects were selected by systematic random sampling technique from mothers of Reproductive age group (15-49). Data was collected by using structured interviewer administered questionnaire. SPSS Version 20 was used to enter, clean and analyze. Descriptive statistics, binary and multivariate logistic regression model with 95% CI were used.

Result: A total of 361 women of reproductive age group were participated with a response rate of 96.3%. Utilization of long acting and permanent contraceptive methods was 37 (10.2%). Women with good knowledge about these methods were 32.1% while 32.7% and 35.2% of them were moderately and poorly knowledgeable respectively. Generally, 198 (54.8%) of the respondents had negative attitude, whereas 163 (45.2%) of them had positive attitude towards these methods. women who have good knowledge on the methods were about four times more likely to utilize [AOR=4.1: 95% CI, 1.8-9.1].

Conclusion and Recommendation: Knowledge and utilization of LAPMs were low. Likewise, more than half of the participants had negative attitude. Having good knowledge in LAPMs was predictor of its utilization. Thus, strategies to increase women's knowledge on LAPMs will have significant contribution to increase the utilization.

Keywords: LAPMs, knowledge, Attitude

INTRODUCTION

Population growth is a major concern particularly in developing countries in view of its impact on wider socio-economic development. In Sub-Saharan Africa, including Ethiopia continued high fertility levels, in line with declining mortality rates, have resulted in a wide gap between birth and death rates, and subsequently in high annual population growth rate. Factors contributing to high fertility include low socio-economic development, deeply ingrained cultural values for large family size, and low levels of contraception. The resulting high rate of population growth has led many countries to adopt population policies aimed at reducing the prevailing high birth rate (Birhan Research and Development Consultancy 2004).

Contraception is crucial for countries whose population size is not balanced with its development; Ethiopia is an example of such countries. Also effective contraceptive could prevent as many as one in every three maternal deaths by allowing women to delay motherhood, space births, avoid unintended pregnancies and abortions, and stop childbearing when they have reached their desired family size (Population Reference Bureau 2004). As a policy, the governments of Ethiopia have implemented to use contraceptives by women's in reproductive age group (Federal Democratic Republic of Ethiopia 2011).

Long-acting and permanent methods (LAPMs) are family planning methods that prevent unwanted pregnancy from at least three years up to life long (Birhan Research and Development Consultancy 2004). It includes the intrauterine device (IUD), implant, male and female sterilization. The IUD and implant are reversible, and may also be referred to as longacting reversible contraception (LARC). These methods are useful for couples wishing to space pregnancies. Male and female sterilization are permanent methods for couples who have completed child bearing (Stringer et al. 2007 & Family Health International 2008).

LAPMs are the most effective methods for preventing unintended pregnancies. During one year of typical use, LAPMs are between three and 60 times more effective than most short-acting methods (Family Health International 2008 & World Health Organization 2007).

LAPMs are convenient for users. Most modern methods of family planning are highly effective when used correctly and consistently during every act of sexual intercourse. In typical use, when people occasionally forget to use a method or use it incorrectly, many contraceptive methods are not as effective. Women who use oral contraceptives must remember to take their pills each day. Likewise, injectable users must have reinjections every one to three months, depending on the type of injectable they are using. Resupply often requires travel to a clinic, and the timing of clinic visits is critical for preventing pregnancies. LAPMs require almost no attention on the part of the user after they are initiated, and their effectiveness is not dependent on daily or monthly action (World Health Organization 2007).

LAPMs are of the more effective and acceptable birth control methods. But, still its acceptability is very low in some countries of the world including more advanced ones. Most people have limited knowledge, poor attitude (perception of poor efficacy and perception of high side effects) and low practice of it (Glasier et al. 2008 & Babalola 2012).

Many potential clients in sub-Saharan Africa lack information or have misconceptions about LAPMs. Even in countries where most people know about family planning, fewer people have knowledge of the intrauterine device and vasectomy than of other methods. Myths and misconceptions are also widespread for these methods (Ose et al. 2012).

Information on the acceptability of long acting and permanent contraceptive is scarce in Ethiopia, although various surveys have been done to assess the utilization and determinant factors of long acting reversible and permanent contraception methods. Thus, there is a need to have information on the knowledge, attitude and acceptance of long acting and permanent contraception methods to improve its utilization. So, the aim of this study was to assess knowledge, attitude and factors associated with the use of long acting and permanent contraceptive methods.

Methodology

Study area and period

The study was conducted in Gesuba town, in Wolaita Zone, Southern Ethiopia from November 20 to December 27- 2014. Gesuba is the town of Offa Woreda. It is found 364 km from Addis Ababa, the capital of Ethiopia, 29km from Wolaita Sodo, the capital city of Wolaita zone. The total population of Wolaita zone is 1,750, 079. Gesuba has a total population of 36,342. ¹⁰

Study Design

A Community based cross-sectional study design was used. All women of reproductive age group (15-49) in Gesuba town were source population, while, study participants were systematically selected. Women with mental impairment, temporary visitors and legally under aged women for verbal consent (15-17 years old) were excluded from the study.

Sample size determination and sampling procedure

The sample size was determined by using single population proportion formula with the assumption of 95% CI, 5% margin error and a prevalence of 66.9% which is a proportion of reproductive age women's who ever heard at least one LAPMs of contraceptive method were used. ¹⁰ The final sample size with 10% non-response rate was 375.

Moreover, systematic random sampling technique was used to select households. The first household (HH) from which we start our study was selected by lottery method. Then after calculating the interval $k = 1717/375$ i.e. = 5, every 5th HH was selected. In HH with more than one women of child bearing age, the older woman was selected.

Data collection tools and procedures

Interviewer administered structured questionnaire which was adopted from similar studies inside and outside the country was used (Glasier et al. 2008, Babalola 2012, Central Statistical Agency of Ethiopia 2012 & Alemayehu et al. 2012). The questionnaire was first prepared in English and translated to Amharic. The Amharic version was used after it is back translated again to English to insure its consistency.

Data Quality Control Assurance

To insure quality of data, two days training were given for the data collectors and supervisors in order to familiarize them with the objectives of the study. Moreover, the questionnaire was pretested in Sodo town, which is outside the study area. In addition, data collection process was checked and supervised on daily bases by the principal investigators.

Data processing and Analysis

Data was entered in to SPSS version 20 for cleaning, editing and analysis. Summary statistics such as frequencies and percentages were computed. Moreover, bivariate and multivariate logistic regression model were used to identify the independent effect of factors with the utilization of LAPMs.

Measurement

A total of 34 Knowledge assessing questions about PLAMs were used. Correct answer for less than or equal to 3

questions was considered as poor knowledge, while, correct answer for more than or equal to 4 and less than or equal to 9 questions was considered as moderate knowledge. Good knowledge was considered for women's with more than or equal to 10 correct answers.

A total of 7 questions were used to assess attitude towards PLAMs. Correct answer for less than or equal to 4 questions was considered as negative attitude and those with more than or equal to 5 correct answers were considered as positive attitude.

Ethical Consideration

Ethical clearance was obtained from the research ethics committee of College of health sciences and medicine, Wolaita Sodo University. Letter of cooperation was taken from Offa Wereda health office. Each respondent was informed about the objective of the study. Moreover, the participation on the study was based on the participant's willingness. A verbal consent was obtained from each study participants. Confidentiality and privacy of the participants was kept at each step of data collection and processing.

Operational Definition

Long-acting and permanent methods (LAPMs) are family planning methods which prevent unwanted pregnancy from at least three years up to life long that includes the intrauterine device (IUD), implant, male and female sterilization (Population Reference Bureau 2004).

Result

Socio-Demographic Characteristics of the Study Participants

In this study a total of 361 women of reproductive age group were participated with a response rate of 96.3%. Two hundred eight (57.6%) were less than 30 years and 153 (42.2%) were greater than or equal to 30 years old. The mean (\pm SD) age of the participants was 28.7 (\pm 7.3) years. There were 209 (57.9%) protestant and 123 (34.1%) orthodox religion followers. Regarding marital status of respondents, 77.6% of them were married. Pertaining to the occupation of participants, 153(42.4%) was housewives. Majority 297(82.3%) of the study participants live within 5 Km distance while 64(17.7%) live more than 5Km far away from the health facilities. ^{Table 1}

Reproductive Characteristics of study participants

The mean (\pm SD) age of women at first marriage was 19.6 (\pm 2.6) years. Out of the total respondents, 28 (7.8%) of them previously faced abortion, of whom, 23 (82.1%) experienced it once. The mean family size was 4.9 with 37.1 % had a family size of three up to four, and 52.6% had five and above family members. Mean (\pm SD) number of live children per women was 2.4 (\pm 2.1). ^{Table 2}

Knowledge of Reproductive Age Women about LAPMs

When respondents were asked if they have information about LAPMs, majority, 273 (73.6%) reported that they heard about at least one method. Of whom 96.7% of them mentioned about implant and 68.5% stated intrauterine contraceptive device. Health professionals as a source of information were mentioned by 49 (13.6%) of the respondents. ^{Table 3}

Regarding the purpose of using LAPMs, 187 (51.8%) of them responded that, it is used to limit family size, whereas, 184 (51.0%) of them indicate that it will prevent unwanted pregnancy. Generally, the knowledge score of respondents about LAPMs showed that 127 (35.2%) of the respondents had low knowledge, 118 (32.7%) were moderately knowledgeable and the remaining 116 (32.1%) of them were highly knowledgeable.

Attitude of Reproductive Age Women towards LAPMs

From 361 women whose age 18-49 years interviewed, 267 (74.0%) support using LPMs of contraceptive. One hundred and thirty seven (38.0%) of the participants responded that they need to use the methods. Moreover, 241 (68.8%) responded that they need to know more about LPMs of contraceptive.

Generally, 198 (54.8%) of the respondents had a negative attitude towards LPMs of contraceptive, whereas, 163 (45.2%) of them had a positive attitude. ^{Table 4}

Utilization of Long Acting and Permanent Contraceptive Methods

The prevalence of long acting and permanent contraceptive methods utilization was 37 (10.2%). Out of this, 31 (8.5%) of the women were using implants and the rest 6 (1.6%) were using IUCD. Regarding service delivering institutions, 21 (56.7%), 9 (24.3%) and 7 (19.0%) of the contraceptive users get the service from health centers, hospital and nongovernmental organizations respectively.

In this study, the reasons cited not to use LAPMs of contraceptive by women were mentioned to be, because of the side effects by 105 (32.4%) of non-users, whereas 27 (8.3%) of the women didn't use LAPMs because of fear of infertility after use. In addition 27 (8.3%) of them mentioned husband disapproval, 30 (9.2%) medical reason, and 108 (33.3%) of them mentioned need for pregnancy as the reason.

Factors associated with the use of Long Acting and Permanent Contraceptive

Bivariate and multivariate logistic regressions were done to assess the predictors of long acting and permanent contraceptive acceptance. Variables which were significant in the bivariate analysis at p-value < 0.2 were entered to the multivariate analysis. As a result, age category, occupation and knowledge on LAPMs were remained in

the final model. Hence, the result of multivariate analysis showed that less than 30 years old women were about three times more likely to accept LAPMs as compared with those with age greater than or equal to 30 years [AOR=2.8: 95% CI, 1.1-7.0]. In addition, those who have good knowledge on LAPMs were about four times more likely to use LAPMs of contraceptive [AOR=4.1: 95% CI, 1.8-9.1]. Employment status in governmental organization is the other strong predictor of LAPMs utilization. Women employed in governmental organizations are about three times more likely to utilize LAPMs than other women [AOR=2.8: 95% CI, 1.1-7.2].

Table 5

Discussion

In this study, 76.3% of participants have information about LAPMs of contraceptive, which is similar with 74.9% of informed participants about modern contraception in Gondar town and 80.0% in Jinka (Kebede 2000 & Mekonnen 2014). This finding was lower than findings from Goba town (86.9%), Adigrat town (94.7%) and women with information about over all modern contraception in EDHS, 2011 (97.4%) (Abulie et al. 2012, Gebremariam & Addissie 2014 & Central Statistical Agency Ethiopia 2012). This discrepancy could be explained by the difference in the study areas, and access to information and the services, as well as increased awareness of communities about all types of contraception including LAPMs through time.

Among this study participants, 51.8 % and 73.1% of women were heard about IUCD and implant respectively, while based on the EDHS 2011, 26.3% and 67.8% of Ethiopian women were heard about IUCD and implant respectively (Central Statistical Agency Ethiopia 2012). The difference may be due to increased awareness of communities about contraception including through time.

The current study showed that, 198 (54.8%) of the respondents had a non supportive attitude towards LAPMs of contraceptive. This is in line with a similar study among Mekele city women which revealed a 52.9% of participants with non-supportive attitude towards long acting contraceptives (Gebremichael 2014).

The overall utilization rate of LAPMs in this study was 37 (10.2%). This result was comparable with 8.7% overall utilization rates of LAPMs in Goba town (Abulie et al. 2012). Out of the total participants of our study, majority or 31 (8.5%) of the women were using implants and the rest 6 (1.6%) were using IUCD. EDHS 2011 reported the utilization of LAPMs in urban areas was IUD 0.9% and Norplant 3.8% (Central Statistical Agency Ethiopia 2012).

From 37 contraceptive users in this study, 31 (83.8%) of the women was accepting implants and the rest 6 (16.2%) use IUCD. This result was comparable with the finding of 80.4% implant users followed by IUCD in Mekele city (Gebremichael 2014). But, it is still lower compared to studies conducted in Nigeria and Egypt.^{18, 19} The discrepancy might be due to the fact that Nigeria and Egypt are more developed than Ethiopia and the existence of better education, cultural and socioeconomic status of participants might be the core reason for the increased acceptance rate in these countries.

The current study revealed that 89.8% of reproductive aged women were not using LAPMs. This result is in line with 83.6% non-users of long acting and reversible contraceptive (Gebremichael 2014).

Regarding service delivering organizations, 81.0% of participants in the current study have got the service from public sectors. Similarly, EDHS 2011 revealed, 92.3% of Ethiopian contraceptive user women got the service from public sectors (Central Statistical Agency Ethiopia 2012).

Level of Knowledge on LAPMs showed strong statistical association with utilization. Women with good knowledge on LAPMs were about four times more likely to use LAPMs of contraceptive [AOR=4.1: 95% CI, 1.8-9.1]. This is consistent with study finding from Arbaminch town, southern region (Getinet et al. 2014). This can be attributed to the fact that women who have good knowledge about family planning will weigh fairly the risks and benefits of using contraception and giving sound decision.

The findings of our study should be interpreted in light of some limitations; the study was cross-sectional therefore we could not establish temporality between current use of LAPMs and the independent factors. Since the study relied on the respondents' self-report, there could have been potential for recall bias about the history related to use of LAPMs. We attempted to control for potential confounders of known factors in the multivariable analysis.

Conclusion and Recommendation

Even though, utilization of LAPMs of contraceptives in the town was higher as compared to the results of other studies and EDHS 2011, there is still low level of information about LAPMs and a significant association between utilization of these methods and their level of knowledge. Thus Strategies to increase knowledge of women in reproductive age group will have significant contribution in order to increase the progress of these contraceptive methods utilization level.

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Competing interest

All authors declare that they have no computing interest

Author's contribution

FB: Conceived the study, FB SAMM: Participated in the design of the study and performed the statistical analysis, FB SA MM: Interpreted the data: SA: Obtained ethical clearance and permission for study: SA: Supervised data collectors: SA FB MM: Drafting the article or revisiting it critically for important intellectual content. All authors read and approved the final manuscript.

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Table 1. Socio-demographic characteristics of reproductive age women in Gesuba town, Southern Ethiopia, 2014.

Characteristics (n=361)	Frequency	Present (%)
Age (Year)		
<30	199	55.1
≥30	162	44.9
Religion		
Protestant	209	57.9
Orthodox	123	34.0
Muslim	27	7.5
Others	2	0.6
Ethnicity		
Wolaita	272	75.3
Amhara	52	14.4
Gurage	26	7.2
Others	11	3.1
Marital Status		
Single	70	19.4
Married	280	77.5
Seperat, Divor&Wido.	11	3.1
Educational Level		
No Education	48	13.3
Only Read and Write	26	7.2
Elementary (1-4 grade)	62	17.2
Elementary (5-8 grade)	91	25.2
Secondary (9-12grade)	108	29.9
Above 12 grd	26	7.2
Occupation		
House Wife	153	42.4
Merchant	81	22.4
Student	53	14.7
Gov't Employ	53	14.6
Others	21	5.8
Health facility distance		
≤ 5Km	297	82.3
>5Km	64	17.7

Table 2. Reproductive characteristics of women in Gesuba town, Southern Ethiopia, 2014.

Characteristics	Frequency	Present (%)
Age at first marriage		
<18	51	17.5
≥18	240	82.5
Number of live birth		
≤2	206	57.1
3-5	83	23.0
≥5	72	19.9
History of Abortion		
Yes	28	7.8
No	333	92.2
Number of abortion		
One	23	82.1
Two and more	5	17.9
Decision made on Number of children to have		
Wife	10	3.5
Husband	4	1.3
Both	277	95.2

Table 3. Knowledge of LAPMs among women of reproductive age in Gesuba town, Southern Ethiopia, 2014.

Variables (n=361)	Yes No (%)	No/I don't know No (%)
Heard about		
IUCD	187(51.8%)	174(48.2%)
Implant	264(73.1%)	97(26.9%)
Vasectomy	64(17.7%)	297(82.3%)
Tubal Ligation	68(18.8%)	293(81.2%)
Knowledge on effectiveness		
IUCD	128(35.5%)	233(64.5%)
Implant	167(46.3%)	194(53.7%)
Vasectomy	47(13.0%)	314(87.0%)
Tubal Ligation	59(16.3%)	302(83.7%)
Knowledge on long term use		
IUCD	173(47.9%)	188(52.1%)
Implant	250(69.3%)	111(30.7%)
Knowledge on permanent use		
Vasectomy	60(16.6%)	301(83.4%)
Tubal Ligation	68(18.8%)	293(81.2%)
Knowledge about effect on breast feeding		
IUCD	86(23.8%)	275(76.2%)
Implant	126(34.9%)	235(65.1%)
Knowledge about effect on sexual activity		
IUCD	70(19.4%)	291(80.6%)
Implant	108(29.9%)	253(70.1%)
Knowledge on easily removability		
IUCD	85(23.5%)	276(76.5%)
Implant	135(37.4%)	226(62.6%)
Knowledge on side effect		
IUCD	42(11.6%)	319(88.4%)
Implant	64(17.7%)	297(82.3%)
Vasectomy	16(4.4%)	345(95.6%)
Tubal Ligation	23(6.4%)	338(93.6%)
Knowledge about effect on STI		
IUCD	33(9.1%)	328(90.9%)
Knowledge on safe & simple procedure		
Vasectomy	37(10.2%)	324(89.8%)
Tubal Ligation	35(9.7%)	326(90.3%)
Knowledge on repeated clinical visit		
Vasectomy	13(3.6%)	348(96.4%)
Tubal Ligation	23(6.4%)	338(93.6%)
Knowledge on effect on sexual performance		
Vasectomy	36(10.0%)	326(90.0%)
Tubal Ligation	31(8.6%)	330(91.4%)
Knowledge on fully effectiveness after 3 mo		
Vasectomy	14(3.9%)	347(96.1%)
Tubal Ligation	23(6.4%)	338(93.6%)
Knowledge on need for counseling before		
Vasectomy	26(7.2%)	335(92.8%)
Tubal Ligation	37(10.2%)	324(89.8%)

IUCD- Intra Uterine Contraceptive Device
 STI- Sexually Transmitted Infection

Table 4. Attitude of reproductive age women towards LAPMs in Gesuba town, Southern Ethiopia, 2014.

Variables (n=361)	Positive Attitude	Negative Attitude
	No (%)	No (%)
Discuss about LAPMs with Partner	167(46.3%)	194(53.7%)
Support using LAPMs	267(74.0%)	94(26.0%)
Need to use LAPMs	137(38.0%)	224(52.0%)
Partner's attitude towards LPMs	126(34.9%)	235(65.1%)
Want to know more about LAPMs	241(68.8%)	120(31.2%)
Responsible to practice contraception	299(82.8%)	62(17.2%)
Large family size impact on economy	344(95.3%)	17(4.7%)
Attitude score towards LAPMs		
Positive Attitude	163(45.2)	
Negative Attitude	198(54.8)	

LAPMs- Long Acting & Permanent Method

Table5. Factors associated with utilization of LAPMs among women of reproductive age in Gesuba town, Southern Ethiopia, 2014.

Variables	Utilization of LAPMs		COR (95% CI)	AOR (95% CI)
	Yes No (%)	No No (%)		
Age category				
<30	29(14.6)	170(85.4)	3.2(1.4-7.4)	2.8(1.1-7.0)*
≥30	8(4.9)	154(94.1)	1	1
Educational Status				
No education, read & write	4(5.4)	70(94.6)	1	1
Elementary	14(9.2)	139(90.8)	1.7(0.5-5.5)	1.0(0.3-3.4)
High school & above	19(14.2)	115(85.8)	2.8(0.8-8.9)	0.6(0.1-2.4)
Occupation				
Gov't employ	10(18.8)	43(81.2)	2.4(1.0-5.3)	2.8(1.1-7.2)*
All others	27(8.7)	281(91.3)	1	1
Knowledge about LAPMs				
Moderate & poor Knowledge	13(5.3)	232(94.7)	1	1
Good Knowledge	24(20.7)	92(79.3)	4.6(2.2-9.5)	4.1(1.8-9.1)*
Responsible to use				
Both	34(11.4)	265(88.6)	2.5(0.7-8.4)	1.2(0.3-4.4)
Self/husband	3(4.8)	59(95.2)	1	1

N.B*= significant at P-value 0.05