

Research article

Predictors of long acting contraceptives utilization among reproductive age women in Arba Minch Zuria district, Ethiopia

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ABSTRACT

Background: Worldwide, roughly 358,000 women and 3 million newborn babies die each year because of complications related to pregnancy and childbirth. Contraceptive use likely prevents more than 272,000 maternal deaths related to childbirth each year. In Ethiopia up to 78 percent of unwanted pregnancies were attributable to contraceptive non-use, incorrect use, or method failure. Long acting contraceptive methods are convenient for users, less discontinuation rate and effectively prevent pregnancy. Despite of its several advantages, long acting contraceptive methods utilization remains relatively low worldwide and in Ethiopia. The aim of this study was to assess the utilization of long acting contraceptive methods and its associated factors among married reproductive age women (15-49) in Arba Minch zuria district.

Methods: community based cross sectional study design was utilized. Simple random sampling technique was used to select 550 study participants from nine Demographic health survey research site kebeles from January 1st 2015 until January 30th 2015. The data was entered in to EPINFO version 3.5.1 and exported to SPSS version 20. Descriptive statistics was employed to describe each variables and multiple logistic regression to determine the association between determinant variables and outcome variable. P value less than 0.05 with 95% Confidence interval was considered as a significant variable.

Result: a total of 550 mothers were interviewed with 100% response rate. Currently 60(33%) mothers are using implants and 9(4.9%) intra uterine contraceptive devices. Highest wealth index (AOR=3.15, 95% CI (1.26, 7.94)), High level knowledge (AOR=7.59, 95% CI (3.22, 17.87)), positive attitude (AOR=3.82, 95%CI (1.97, 7.36)), No desire for more children (AOR=6.44, 95% CI (2.67, 15.51)) and husband support (AOR=2.54, 95% CI (1.41, 4.57)) showed significant association with utilization of long acting contraceptive methods.

Conclusion: Utilization of long acting contraceptive methods was low as compared to other studies. Having high level knowledge, positive attitude, No desire for more children and husband's support for family planning use showed significant association with utilization of long acting methods. The importance of use of these methods over the other has to be advocated through media to increase awareness and utilization. A strategy to involve husbands' in utilization of long acting contraceptives has to be designed in the health education program.

Keywords: Arba Minch Zuria, reproductive, Contraceptives, utilization, predictors

Introduction

High fertility and rapid population growth have an impact on the overall socio-economic development of the country in general and maternal and child health in particular. Maternal and child mortality are two of the major health problems challenging healthcare organizations, especially in developing countries. The majority of maternal deaths are the direct result of complications encountered during pregnancy and arising from unsafe terminations of pregnancies. Unwanted, mistimed and unintended pregnancy is the most common cause of maternal mortality in developing countries.¹

Worldwide, 358,000 women and 3 million newborn babies die each year because of complications related to pregnancy and childbirth. Nearly all these deaths occur in developing countries, where 10 to 15 percent of pregnancies end in maternal death due

to unsafe abortions.² However, contraceptive use likely prevents more than 272,000 maternal deaths related to childbirth each year.^{3,4}

In the African region utilization of long acting family planning methods such as IUCD and Implants is very low as compared to the global figure. In Africa only 4.6% and 1.0% use IUCD and implants respectively while globally utilization of IUCD is higher (13.9%) in contrast to an implant which is only utilized by 0.5% of women. In sub-Saharan African countries the proportion of women currently using long acting is significantly lower than the proportion of using short-acting methods. In many countries in the region, fewer than 5 percent of women who are using contraception are using long acting methods i.e. 0.7% IUCD and 1.1% Implant.⁵ In Ethiopia only 0.5% and 3.4% use IUCD and implant respectively.⁶

Different factors affect the utilization of family planning

especially long acting methods. These factors include cultural factors, obstetrics factors, spouse influence and other socio-demographic factors. A study conducted in sub Saharan Africa countries showed that younger age group, educated women, educated husband and those who belongs to high economic class use contraceptives.⁷ Knowledge of contraceptives, previous experience of unwanted birth and abortion, having children more than four, having male child, proximity of health facility and spouse approval are some of the factors which facilitate utilization of long acting contraceptives. However, little is known in Arba Minch zuria districts which compose different cultures and ethnic groups. This study tried to assess the predictors of long acting contraceptives utilization among married reproductive age group women.

Methods

Study area and period

The study was conducted in nine kebeles (lowest level of government administration in Ethiopia) of Arba Minch Zuria districts from January 1st 2015 until January 30th 2015.

Study design

This was a community based cross sectional study on married reproductive age women who live in Arba Minch zuria districts.

Study population, sample size and sampling technique

In Arba Minch Districts there are 29 rural kebeles and 9 kebeles were selected by simple random sampling technique. Sample size was calculated using EPINFO version 3.5.1 by considering major determinants' of utilization of long acting family planning from a study conducted in Goba town, Ethiopia, 95% CI, 80% power of the study, ratio of 1:1 and adding 10% none response rate; a total sample size was 550.⁸ The study participants were selected using simple random sampling technique from the sampling frame developed by Arba Minch Demographic health development office. There were a total of 71,419 female population in the district, 17, 893 were in the reproductive age group and 10,217 were married reproductive age women who is eligible for the study. When there was a household with more than one reproductive age women only one was selected by lottery method.

Data collection methods and instruments

Before the actual data collection, pretest was done on 5% of the study participants i.e. 28 reproductive age women in Sile Limat kebele which was not included in the main study. Findings from the pretest such as ambiguity or unclear words were modified. A structured interviewer administered questionnaire was used to collect the data which was adopted from the previous studies.⁸ Twenty two trained demographic and health development data collectors were recruited for data collections and supervised by three masters' holder supervisor. On daily bases all questionnaires were checked for any missed information and immediate actions were taken.

Measurements

Knowledge measured by the total number of correct answers to 8 items on knowledge with a minimum score

of 0 and maximum of 8. To measure the knowledge it was categorized based on the percent of knowledge of the distinct characteristics of LAMPs as: "**high**" - those who knew 80% and above, "**moderate**" those who know 60 - 79% and "**low**" those who knew less than 60%.

Attitude of married women to the use of LAPM grouped into three: "agree", "disagree" and "not sure". To measure the attitude of the married women, two categories were assigned: **Positive Attitude** - those who scored above mean to the correct answers from attitude measuring LAPMs questions. **Negative Attitude** - those who scored mean and below mean to the correct answers from attitude measuring LAPMs questions.⁸

Married women's use or not use of long acting and permanent contraceptive methods among study participants set as binary outcome variable.⁸

Long acting family planning Methods includes Implants (Jadele, Sino plant, Implanone) and Intra uterine contraceptive devices.

Data processing and analysis

The data was coded and entered in to EPINFO version 3.5.1 and exported to SPSS version 20 for further analysis. Descriptive statistics for each variable were calculated. Bivariate and multivariate analysis using logistic regression model were performed by considering 95% CI and p value less than 0.05 as a significant indicator.

Ethical consideration

After thorough revision of the proposal by Arba Minch University Ethical review board, Ethical clearance was obtained. Official letter was written to Arba Minch Zuria district health office and respective kebele administration. Participants were informed the benefit of the study and the time taken for the interview as well as their right to withdraw for participation in partial or completely. Informed oral consent was obtained for participation and the information was kept anonymously and confidentially.

Result

Socio-demographic characteristics of the study participants

Majority (42.9%) of the study participants were in the age group of 25-34 years, 348(63.3%) protestant religion followers and 425(77.3%) were Gamo by their ethnicity. Three hundred nine (56.2%) can't read and write, 503(91.5%) were house wife, 116(21.1%) in the lowest wealth quintile and 170(30.9%) in the highest wealth quintile (Table 1).

Reproductive health history of the participants

More than half of them (54.2%) were married and 362(65.8%) deliver after the age of 18 years old. Four hundred eighty eight (88.7%) were two and more times pregnant and 428(77.8%) decided the number of children with joint discussion with their husband (Table 2).

Information about family planning

Four hundred twenty four (77.1%) heard about modern family planning and the most common method mentioned by

Table 1: socio-demographic characteristics of married women in Arba Minch Zuria district.

	Variables	Number	Percent
Age	15-24	72	13.1
	25-34	236	42.9
	35-44	186	33.8
	>=45	56	10.2
Religion	Muslim	4	0.7
	Orthodox	195	35.5
	Protestant	348	63.3
	Atheist	3	0.5
Ethnicity	Gamo	425	77.3
	Zeyse	72	13.1
	Welayita	37	6.7
	Others (Oromo, Amhara and Ganta)	16	2.9
Educational status	Read and write	47	8.5
	can't read and write	309	56.2
	1-6grade	123	22.4
	7-12grade	64	11.6
Occupation	>12grade	7	1.3
	Housewife	503	91.5
	Employee	8	1.5
	Daily laborer	4	0.7
Monthly income (n=504)	Merchant	28	5.1
	Student	3	0.5
	Unemployed	4	0.7
	<500	382	75.8
Have radio and or TV	501-100	92	18.3
	>1001	30	5.9
Wealth index	Radio	192	34.9
	Television	72	13.1
	Lowest	116	21.1
	Second	107	19.5
	Middle	10	1.8
	Fourth	147	26.7
	Highest	170	30.9

the participants was injectable. The main sources of information mentioned about family planning methods were health workers and the participants aware that those methods are available in governmental and private health facilities (Table 3).

Utilization of long acting contraceptive methods

One hundred eight two (67.7%) have ever used any modern family planning methods. Currently, 60(33%), 9(4.9%) and 5(2.8%) used implant, IUCD and tubaligation respectively. Most them (91.2%) gain access for the family planning methods from government owed health facilities. Forty percent of the study participants used the methods for one to three years duration (Table 4).

Factors affecting utilization of long acting contraceptive methods of family planning

Wealth index, knowledge, desire for more children, husband

support and educational status showed significant association with utilization of long acting and permanent methods of family planning. Those participants in the highest wealth index were more likely (AOR= AOR=3.15, 95% CI (1.26, 7.94)) to use long acting and permanent methods of family planning than those in the lowest wealth index. Those who had high level of knowledge (AOR= AOR=7.59, 95% CI (3.22, 17.87)) were more likely to use long acting contraceptives than those with low level knowledge. Women who had their husband support (AOR= AOR=2.54, 95% CI (1.41, 4.57)) were more likely to use long acting family planning methods than their counterparts. Those women who had a positive attitude (AOR= AOR=3.82, 95%CI (1.97, 7.36)) towards long acting contraceptive utilize more likely than those who had negative attitudes. Women who had no desire for pregnancy (AOR= AOR=6.44, 95% CI (2.67, 15.51)) were more likely to use long acting contraceptives (Table 5).

Discussion

In this study only 4.9% of the married women used IUCD which is lower as compared with the study in Mekelle.⁸ Which might be due to the fact that large number of women had misconception about IUCD and its side effects such as interference with sexual intercourse, cancer, delays pregnancy, restriction from working normal activity and invasion of privacy during its insertion and removal. The main reason perceived for not practicing IUCD was the use of other methods of contraceptives, fear of side effects, cause cancer and husband's disapproval.

Married women with positive attitude towards long acting contraceptive methods had the highest rate of using the methods which is supported by another study that showed positive attitude of women to contraceptive was an important factor for promoting use of long acting contraceptives.⁸ The majority users of long acting contraceptives had joint discussion with their husband about the number of children and were those who had radio and/or TV.

Knowledge of long acting methods was significantly associated with utilization. Those who had high level knowledge were utilized 7.59 times more than those with low level knowledge. This finding is similar with the finding in Butajira, Mekelle, Uganda and South Africa.⁸⁻¹¹

Desire for future pregnancy was associated with utilization of long acting contraceptive. Those who didn't have a desire for future pregnancy utilized long acting contraceptive 6.44 times more than their counter parts. This finding is in line with the finding from a study conducted in Uganda and Bangladesh.^{10, 12}

Husband support plays significant role on utilization of long acting contraceptive. Those women who had support from their husband utilized 2.7 times than their counter parts. This is similar with the study done in Butajira and Uganda which indicated that participants who perceived that their husbands do not support the use of long acting contraceptive had lower odds of intention to use long acting contraceptives.^{8, 10, 13}

Those mothers with highest and fourth class wealth quintile utilized family planning 3.15 and 2.95 times respectively than their counter parts. This finding is in line with the study done in Karachi.¹⁴

Table 2: Reproductive health history of the study participants.

Variables		Frequency	Percent	
age at marriage	<18 years	252	45.8	
	>=18 years	298	54.2	
age at delivery (490)	<18	128	23.3	
	>=18	362	65.8	
number of pregnancy (521)	One	33	6.0	
	two and above	488	88.7	
number of abortion(106)	One	64	11.6	
	two and above	42	7.6	
Decision maker to have children	Wife	51	9.3	
	Husband	51	9.3	
	Joint discussion	428	77.8	
	Husband family	1	.2	
	not decided	19	3.5	
Sex of the child	Male (519)	<=2	356	68.5
		>2	163	31.5
	Female (517)	<=2	338	65.3
		>2	179	34.5

Table 3: Information about family planning among married reproductive age group women in Arba Minch Zuria district, 2015.

Variables	Response option	Frequency	Percent
Ever heard modern family planning	Yes	424	77.1
	No	126	22.9
Which modern contraceptives you heard about*	IUCD	164	29.8
	Injectable	390	70.9
	Implants	300	54.5
	Tubaligation	68	12.4
	Condom	67	12.2
From whom you got information for the first time	Neighbors	59	13.9
	Health workers	358	84.4
	Others **	7	1.7
Source of family planning provision you know	Government health facility	409	96.4
	Private health facility	12	2.8
	Pharmacy	3	0.8
Discuss family planning option with husband	Yes	258	60.8
	No	166	39.2
Husband support use of family planning	Yes	233	55
	No	191	45

*multiple response

**husband and media

Conclusions

The finding of this study showed that utilization of long acting contraceptive methods was low. Majority of the participants had low level knowledge and negative attitudes towards long acting contraceptive methods. There were different factors which affects utilization of long acting contraceptive methods. Those factors were knowledge, attitude, and desire for future children, husbands support for utilization of long acting contraceptive methods and wealth index. Mothers who had high

level knowledge, positive attitude, no desire for future children, highest wealth index and those who had husband's support utilized long acting and permanent family planning methods unlike to their counter parts.

Utilization of long acting contraceptive methods was low and the importance of use of the methods has to be advocated through media to increase awareness and utilization. A strategy to involve husbands' in utilization of long acting contraceptives has to be designed in the health education program.

Table 4: Utilization of long acting contraceptive methods of family planning among married reproductive age women in Arba Minch Zuria district, 2015.

Variables	Response option	Frequency	Percentage
Have you ever used modern family planning (269)	Yes	182	67.7
	No	87	32.3
Which method you are using currently	Pills	7	3.8
	Depo-provera	101	55.5
	Implant	60	33
	IUCD	9	4.9
	Tubaligation	5	2.8
Source of family planning	Government health	166	91.2
	Private health	15	8.2
	Pharmacy	1	0.6
Duration of family planning use	<1 year	60	22.3
	1-3 years	109	40.5
	>3 years	100	37.2
Who choose the method	Myself	228	84.8
	Health care provider	23	8.5
Practice of long acting contraceptives (69)	Husband	8	6.7
	Implant	60	10.9
	IUCD	9	1.6

Table 5: Determinant factors for utilization of long acting contraceptive among married reproductive age women in Arba Minch Zuria district, 2015.

Variables	Utilization of long acting contraceptives		COR (95% CI)	AOR (95% CI)
	Yes (%)	No (%)		
Wealth index	Lowest	7(6.0) 109(94.0)	1.00	1
	Second	8(7.5) 99(92.5)	1.258(0.440,3.597)	1.19(0.46,3.51)
	Middle	1(10.0) 9(90.0)	1.730(0.191,15.658)	1.89(0.19,17.96)
	Fourth	23(15.6) 124(84.4)	2.888(1.193,6.993)	2.95(1.16,7.49)
	Highest	34(20.0) 136(80.0)	3.893(1.661,9.123)	3.15(1.26,7.94)*
Knowledge	High	18(42.9) 24(57.1)	7.839(3.939,15.602)	7.59(3.22,17.87)*
	Moderate	13(48.1) 14(51.9)	9.706(4.281,22.006)	6.738(3.27,13.87)*
Own radio	Low	42(8.7) 439(91.3)	1.00	1.00
	No	35(9.8) 323(90.2)	1.00	1
Desire for more children	Yes	38(19.8) 154(80.2)	2.277(1.384,3.746)	1.38(0.72,2.64)
	Want	62(11.9) 459(88.1)	1.00	1
Husband support	Don't want	11(37.9) 18(62.1)	4.524(2.042,10.024)	6.44(2.67,15.51)*
	No	19(9.9) 172(90.1)	1.00	1
Educational status	Yes	54(23.2) 179(76.8)	2.731(1.555,4.796)	2.54(1.41,4.57)*
	Can't read and write	31(10) 278(90)	1	1
	Read and write	42(17.4) 199(82.6)	1.893(1.150,3.116)	1.13(0.63,1.96)
Attitude towards long acting contraceptives	Positive	21(36.8) 36(63.2)	4.947(2.688,9.106)	3.82(1.97,7.36)*
	Negative	52(10.5) 441(89.5)	1	1

* Statistically significant at p value <0.05

Competing interests

The authors declared that they have no competing interests.

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REFERENCES

1. Susheela S, Tamara F, Hailemichael G, Ahmed A, Yirgu G, Solomon K and Suzette A: The Estimated Incidence of Induced Abortion In Ethiopia, 2008. *Int Perspect Sex Reprod Health*, 2010, 36:16–25.
2. World health organization: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008.

3. Saifuddin, A: contraceptive use averts 272,000 maternal deaths worldwide. <http://www.jhsph.edu/news/news-releases/2012/ahmed-contraception.html> (2012).
4. Family health international: Addressing unmet need for family planning in Africa. https://www.k4health.org/sites/default/files/LAPM%20methods_English.pdf (2007).
5. Janowitz B, Gmach R, Otterness C: The commercial Sector's Role in Providing Long Acting and Permanent Methods. Bethesda, Maryland. 2006.
6. Ethiopian central statistics agency. Ethiopian demographic and health survey. <http://www.csa.gov.et/> (2011).
7. Don L: Abortion and Contraceptive Use in Sub-Saharan Africa: How Women Plan Their Families. *Afr J Reprod Health* 2011; 15: 13-23.
8. Alemayehu M, Belachew T, Tilahun T. Factors associated with utilization of long acting and permanent contraceptive methods among married women of reproductive age in Mekelle town, Tigray region, north Ethiopia. *BMC pregnancy childbirth*. 2011; 12: 9.
9. Mekonen W, Worku A. Determinants of low family planning use and high unmet need in Butajira District, South Central Ethiopia. *J Reprod health*. 2009; 8: 8.
10. John E. Utilization of Family Planning Services among Sexually active people living with HIV/AIDS in Taso Tororo: Makerere University; 2010.
11. Crede S, Hoke T, Constant D, Green M, Moodly J, Harries J. Factors impacting knowledge and use of long acting and permanent contraceptive methods by postpartum HIV positive and negative women in Cape Town, South Africa: a cross-sectional study. *BMC Pub health*. 2009; 12: 9.
12. Shahid U, Charkaborty N. Factors affecting the use of contraception in Bangladesh: A multivariate analysis. *Asia Pac J Pop*. 1993; 8:11
13. Rob S, Baschieri A, Steve C, Monique H, Niyovani M. Contextual Influences on Modern Contraceptive Use in Sub-Saharan Africa. *Am J Public Health*. 2007; 97: 8.
14. Hagen C, Fariya F. Fertility and Family Planning Trends in Karachi, Pakistan. *Int Fam Plan Perspect*. 1999; 25: 10-20.

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