

Determinants of Long Acting Reversible Contraceptives Use among Child Bearing Age Women in Dendi District, Western Ethiopia

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Abstract

Background: Since 1966, Family Guidance Association of Ethiopia (FGAE) started modern family planning in Ethiopia; even though the contraceptive prevalence rate/CPR/remains 28.6%. Ethiopia is the 2nd most populous country in Africa with its fast population growth rate. Every year 1 million unwanted pregnancy, 3400 abortion, 130,000 infant deaths and more than 6800 women die during child birth. So, long term family planning is a vital approach to halt problems arising from fast population growth and complications related with pregnancy.

Therefore, this study aimed to assess the determinants of long acting reversible contraceptive utilization among child bearing age women in Dendi district.

Methods: Institution based cross sectional study was conducted among child bearing age women in family planning unit of Dendi district health centers, western Ethiopia from May to June 2013. A total of 317 women were nominated using systematic sampling technique after selecting two health centers found in the district using simple random sampling.

Result and conclusion: Total of 301 Women in child bearing age (WCA) were participated in this study and 236(78.4%) were married, 164(54.5%) were 25-34 age group with a mean age of 29.3 and SD of 7. The long acting reversible contraceptives (LARCs) prevalence rate among Women in child bearing age was 17.6%. Educational status (AOR=2.82 95%CI=(1.01, 4.39)), spousal discussion (AOR=3.34, 95%CI=(1.01, 7.78)), spousal approval (AOR=1.99, 95%CI=(1.11, 5.08)) and family size (AOR=5.9 95%CI=(3.44, 13.43)) found to have significant association with long acting reversible contraceptive methods use.

Conclusion and recommendation: Current LARCs prevalence among child bearing age women was 17.6%. Spousal discussion, partner approval, number of children and the educational status of the women found to be significant factors with LARCs. West Shewa health office should increase competence of service provider and create awareness on the availability of the service, as well there should be male participatory awareness creation programs regarding LARCs.

Keywords: Factors; Long acting contraceptive; Utilization; Dendi; Ethiopia

Introduction

In the world more than 200 million people are not accessing Family planning, and 358,000 women die as a result of pregnancy and child birth. Even if huge percentage of this number holders are developing countries like Ethiopia [1-3].

The continuing growth of the world population has become an urgent global problem. Most of this growth is occurring in developing countries where the fertility rate is very high. High fertility and rapid population growth have an impact on the overall socioeconomic development of the country in general and maternal and child health in particular [4]. Maternal and child mortality are two of the major health problems challenging health care organization especially in developing countries. The majority of maternal deaths are the direct result of complications encountered during pregnancy and arising from unsafe termination [5].

As study done by WHO on July 2012 contraceptive use has increased in many parts of the world especially in Asia and Latin America but to be low in sub-Saharan African countries [3]. Family planning is a human right; yet today 222 million women in developing countries are unable to exercise that right because they lack contraceptives, information and quality services or because of socioeconomic forces prevent them from taking advantages of services even where they are available [4].

In Ethiopia 1 million unwanted pregnancy, 3,400 abortion, 130,000 infant death and more than 6,500 women die during child birth [5].

Even if the family size (numbers of children per women) is slowly decreasing this was 6.4 children women in 1990 E. C, 5.9 in 2000 and 5.4 in 2005 while fertility rate is increasing. Family size directly affects the GDP of the country that if the current 5.4% of family size decrease to 4%; it is believed that GDP will increase by 0.35% [6].

Despite reported increase in knowledge of FP in both EDHS 2000 and 2005, married termination reports very limited use of contraception methods with very poor understanding of long term FP. Birth control is a priority in Ethiopia and many programs to increase contraceptive practice have been implemented by Ethiopian national population policy since 1993 G.C. [7,8] however the problem of high fertility and low contraceptive practice remains unresolved. According to the 2011 EDHS the TFR of the country for the year 4.8% children per woman and the CPR was only 20% for all WCA (15-49 years old) which remains too low to affect the fertility level significantly [8].

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As all part of Ethiopia, women's living in Dendi woreda are suffering from unwanted pregnancy, abortion and other complication related to pregnancy. Still, economically poor families in Dendi woreda have large family size. There is no any documented research done on long term FP and related topics in Dendi woreda to intervene the above mentioned problems. Hence, this study was tried to assess determinants of long acting reversible contraceptives utilization in health centers found in Dendi woreda, West shewa zone, Oromia region, Ethiopia.

Method and Materials

Study area and period

Institution based Cross sectional study was conducted in health centers found in Dendi district from May to June, 2013. Dendi is one of the 180 woredas in Oromia region located in west shewa zone of the region which is 76 km west of Addis Ababa and situated on main road running between Addis Ababa and Ambo. According to CSA (central statistical agency) of Ethiopia 2007 report the total population living in Dendi district was 165,803 of whom 81,815 were women. The health service coverage of Dendi woreda is delivered with 6 health centers. The study was conducted from May 1-30, 2013 G.C.

All women in child bearing age (15-49 years old) who were permanent residents in Dendi woreda was the source of this study and The study population of this study was all women in child bearing age who visited FP unit of Health centers found in Dendi woreda during data collection period, who were included in sample size.

Sample size and technique

The study used a single population proportion formula. As study conducted in Malawi on factors influencing long acting and reversible family planning method use, found that contraceptive prevalence was 25% [9]. So this study used this value to obtain the minimum sample size at 95% certainty and maximum discrepancy of 5% between the sample and the population. In addition, 10% was added as a contingency to compensate for the possible non response. The final sample size was computed to be 317.

Among the health centers found in Dendi district two health centers selected by lottery method and the 317 sample size was proportionally allocated to each health centers based on the last year similar period average daily client flow (36 and 12 clients from Ginchi and wolonkomi health centers respectively), which were obtained by referring client registration log books. 212 and 105 sample size allocated proportionally depending on the last year average client flow and the subjects selected by systematic random sampling method from the $1440/317=4$ every 4th client came to the unit involved in the study.

Measurement

The following operational definitions were used to measure the outcome variable of the study. In this study, long acting reversible contraceptive was defined as modern contraceptive that intends to prevent pregnancy and require action more than 3 months up to 12 years this includes Implants (Implanon, Jaddele, Sino plant and Norplant) and IUCD. Contraceptive use is defined as those women who were currently using, or whose sexual partner is currently using, at least one method of contraception, regardless of the method used and marital status. Child bearing age was defined as women that are found in reproductive age group (15-49 years).

Data collection tool and technique

The data collection tool used in this study was face to face interview

using structured questionnaire. The English version of questionnaire was translated by experts into local language Afan Oromo to obtain data from the study participants and to ensure under clarity of its content. Then Afan Oromo version was transcribed back to English version to check for consistency. It was prepared by the principal investigator based on literature reviews, research questions and prior researches conducted on the issue. The questionnaire was designed to obtain information on socio demographic characteristics, factors associated with LARC utilization and spousal discussion and approval. Besides, the instrument was pretested for its reliability in Awaro health center. Data was collected by 20 trained female diploma midwives and nurses. Two days of training have been given to data collectors and supervisors on the objectives of the study, the contents of the questionnaire, and particularly on issues related to the confidentiality of the responses and the rights of respondents. Data were collected within thirty day under supervision of the principal investigator.

Data processing and analysis

Data coded and entered to EPI info, categorize and analysed using SPSS version 20 (Chicago, Illinois) statistical packages. The perfection of the data entry was checked by double data entry. Any error identified during data entry was corrected by revising the original completed questionnaire. Associations between outcome and predictor variables were presented using odds ratios and 95% confidence interval. Both bivariate and multivariate binary logistic regression was used to assess the association between outcome and predictor variables. During analysis the variable with p-value < 0.05 was considered as statistically significant.

Ethical considerations

Ethical clearance was obtained from Ambo University Research and Ethical review bureau. Permission was also asked to Dendi Woreda health bureau and gave Ethical approval. To keep confidentiality the individual name wasn't written in the data collection tool. The aim of the research and its benefit to the community was clearly explained. At the end their Verbal consent was asked after telling that they have a full right to leave the interview at any time they want. Privacy and confidentiality of respondent information was upheld.

Result

Socio demographic characteristics

The total response rate of the survey was 94.95% out of 317 women. Of whom 54.5% (164) of the respondents were in age group 25-34 women with mean age of 29.3, SD of 7.156 (51.8%), 103 (34.2%) and 42 (13.9%), were followers of orthodox, protestant and Muslim respectively. The majority 236 (78.4%) were married. Most of them 152 (52.8%) of the respondents were house wife. The majority 119 (39.5%) never attend formal education while 26.6% (80) attend secondary education and above. The economic status of respondents to be stated by income per a month 142 (47%) were having a monthly income of greater than 1000 ETB per a month. 150 (49.8%) of the respondents have 3-5 children per women (Table 1).

Associated actors with different long acting FP methods practice

The current long term FP method utilization was analyzed together with the socio-economic and demographic characteristics of the respondents, to determine if there was a significant association. Some of the variables age, educational status, occupational status and family size which showed significant associations with long acting contraceptive

S.N	Characteristics		Frequency	(%)
1	Age	15-24	98	32.5
		25-34	164	54.5
		35-49	39	12.9
		Total	301	100
2	Religion	Orthodox	156	51.8
		Muslim	42	13.9
		Protestant	103	34.2
		Total	301	100
3	Educational Status	Illiterate	119	39.5
		Primary	102	33.9
		2ndryandabove	80	26.6
		Total	301	100
4	Occupation	House wife	159	52.8
		Employee	57	18.9
		Merchant	25	8.3
		Student	29	9.6
		Daily labor	31	10.3
		Total	301	100
5	Income	<500	93	30.9
		501-1000	66	21.9
		>1000	142	47
		Total	301	100
6	Marital status	Married	236	78.4
		Single	52	17.3
		Widowed	7	2.3
		Separated	3	0.99
		Divorced	3	0.99
		Total	301	100
7	Family size	1-2	72	23.9
		3-5	150	49.8
		>5	79	26.3
		Total	301	100

Table 1: Socio demographic characteristics distribution with their frequency and percentages among WCA came to Dendi woreda health centers family planning unit from May 1-30, 2013.

utilization in the bivariate analysis could not persist in having such associations in the multivariate analysis.

In multivariate analysis, it was found that Four variables; educational status, spousal discussion, husband approval and family size have significant associations with long acting utilization of contraceptive.

Those women, who are secondary education and above, are 2.82 times more likely to utilize long acting contraceptive utilization (AOR 2.82 95% CI: 1.01, 4.39) than illiterates. Regarding to Spousal discussion, Women who have discussed about LARCs with their husband were 3.34 times more likely to use long acting contraceptives than those who have no spousal discussion about LARCs (AOR 3.34 95% CI (1.23, 7.78)). Husband approval were found to have significant association those whom husband approved the current LARC use were found 1.99 times more likely to use LARCs (AOR 95% CI 1.99(1.11, 5.08)). Regarding to the number of children, this study revealed that those women who have greater than five children have 5.9 times more likely to use LARCs than those women, who have less than five children (AOR=5.9 95% CI: 3.44, 13.43) (Table 2).

Discussion

This study has aimed at assessing the determinants of long acting

reversible contraceptives utilization in health centers found in Dendi woreda, west shewa zone, Ethiopia. According to this study the current long acting contraceptive prevalence was 17.6%. This is high with compared to national level, EDHS 2011, which shows that long acting contraception use have lowest rates (2.5%) in account IUD 0.2% and implant 2.3% [8]. As well as, this study is shows that high LARC utilization as compared to study done in Goba town, bale zone, eastern Ethiopia the utilization of long acting FP in the town was 8.7% [10].

Association shows that Those women, who are secondary education and above, are 2.82 times more likely to utilize long acting contraceptive utilization than illiterates. This finding parallel with the result study done in Addis Ababa to identify factors associated with IUD use [8]. Similarly, it was supported by the result found from New York; the

Variables	Current LARC practice		COR CI (95%)	AOR(95%CI)
	User	Not user		
Age				
15-24	12	86	1.00	1.00
25-34	23	141	1.16(0.55,2.46)	1.97(0.81,3.43)
35-49	18	21	6.14(2.56,11.69)*	2.02(0.97,7.71)
Religion				
Orthodox	34	122	1.00	1.00
Protestant	14	89	0.56(0.29,1.11)	0.97(0.54,2.31)
Muslim	5	37	0.48(0.17,1.32)	0.13(0.03,1.24)
Education status				
Illiterate	4	115	1.00	1.00
Primary	6	96	1.79(0.49,6.55)	1.74(0.31,7.48)
2 nd and above	43	37	33.4(1.24,39.32)*	2.82(1.01,4.39)*
Occupational status				
Employee	28	29	1.00	1.00
House wife	8	151	0.055(0.022,0.13)*	0.693(0.47,1.12)
Merchant	5	20	0.25(0.08,0.78)*	0.24(0.11,2.47)
Student	8	21	0.39(0.15,1.03)	0.39(0.25,1.40)
Daily labor	4	27	0.15(0.047,0.49)*	0.45(0.33,1.39)
Income				
<500	8	85	0.38(0.16,0.88)*	0.33(0.16,1.97)
501-1000	17	49	1.41(0.7,2.8)	1.63(0.7,2.8)
>1000	28	114	1.00	1.00
Marital status				
Married	42	194	1.00	1.00
Single	6	46	0.6(0.24,1.50)	0.6(0.24,1.23)
Widowed	2	5	1.84(0.34,9.84)	2.02(0.8,7.01)
Separated	2	1	9.23(0.8,14.2)	6.6(0.82,16.9)
Divorced	1	2	2.3(0.20,26.0)	1.78(0.2,12.4)
Number of children				
1-2	4	68	1.00	1.00
3-5	19	131	2.46(0.8,7.53)	2.46(0.8,7.52)
>5	30	49	10.4(3.44,31.45)*	5.9(3.44,13.43)*
Discussion with husband				
Yes	19	17	8.6(4.3,14.1)	3.34(1.01,7.78)*
No	23	177	1.00	1.00
Husband approval [12]				
Yes	14	22	3.9(1.79,8.52)	1.99(0.97,5.08)
No	28	172	1.00	1.00

* p value<0.05, *indicates those show significant association

Table 2: Multi variable logistic regression for Factors associated with long acting reversible contraceptive utilization among WCA in Dendi woreda health centers, 2013.

more women are educated, the less they have taboos regarding the use of modern methods of contraception and especially LARCs [11].

There is significant association between current long term FP utilization and spousal discussion which is, Women who have discussed about LARCs with their husband were 3.34 times more likely to use long acting contraceptives than those who have no spousal discussion about LARCs. Encouraging and educating husband on the importance of long acting FP can increase the long term FP and increasing competence of females will open the way for discussion. This similar with the study done in Jimma, Women who have discussed about LARCs with their husband were found 15.48 times more likely to use long acting contraceptives than those who have never discussed about LARCs [12].

Regarding to the number of children, this study revealed that those women who have greater than 5 children have 5.9 times more likely to use LARCs than those women, who have less than 5 children. This is resemble with the study done in North west Ethiopia, Women having five or more children had 1.67 times higher demand for long acting contraceptive methods compared to women who do not have children at all [13]. And also this study is similar with the result of study done in Batu town which showed that women who had five or more children had 6 times higher demand for long acting contraceptive methods paralleled to women who didn't have children at all [14].

Limitation of the Study

- a) Since this research was quantitative study it may fail to provide valuable insights into the local perspectives of study populations and it doesn't produce the culturally specific and contextually rich data.
- b) The study design is cross sectional; therefore it may be difficult to establish temporal relationship.
- c) This study was conducted among only family planning service users in the government facilities; it may not representative to general population.

Conclusion and Recommendation

Current long acting FP prevalence among WCA was 17.6%. Regarding the utilization of long acting FP methods spousal discussion, number of children and the educational status of the women found to be significantly associated.

The local government including west shewa zone educational office and other stake holders should focus on increasing educational level by giving chance and encouraging women to engage in formal education. Oromia region health bureau and west shewa zone health office must ensure long acting FP methods security, increase competence of service providers and create awareness on various methods and their side effects. There should be enthusiasm to empower women regarding decision making. Emphasis should be given to create spousal discussion among married women on issues like using FP and related issues. Spousal discussion highly associated with educational status of husband so government should focus on education for all citizens and male participatory discussions should be implemented. There should be more research's done on community level for identification of other factors.

Author's Contribution

AS and KT designed the study, participated in the data collection, performed analysis and interpretation of data and drafted the paper and prepared the manuscript. GK assisted with the design, approved the

proposal, and revised drafts of the paper. AS assisted with the design, approved the proposal, and revised drafts of the paper and prepared and revised the manuscript. All authors read and approved the final manuscript.

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