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Research Article

Utilization of reversible long acting family planning methods among married 15-49 years women in Areka town, Southern Ethiopia

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ABSTRACT

Background: Utilization of family planning can improve the means of people in poverty. Long-acting reversible contraceptive (LARC) methods in particular can considerably reduce the level of unwanted pregnancy as well as maternal mortality and morbidity more in developing countries. Thus, study was conducted with the aim of assessing the level of LARC utilization and associated factors among married women (15-49) in Areka town, Southern Ethiopia.
Methods: Community based cross-sectional study was conducted in a total of 357 women within the study area. Population proportion to size was used to assign sample to kebele and participates were selected by systematic random sampling technique from randomly selected kebeles. Data collection was conducted by trained data collectors, using structured and pretested questionnaire. Finally, data entered, cleaned, and analysed in SPSS 16.
Results: The utilization of LARC was 106(29.7%) of study participants. Particularly, LARCs utilization were 81(22.7%) for implants and 25(7.0%), Intrauterine contraceptive device (IUCD). Statistically, LARC utilization was (AOR=2.47 at 95%CI (1.24-4.90)) times likely among 26-36 aged mothers compared to 15-24 age groups. Government employed mothers were (AOR=2.59 at 95%CI (1.39-4.79)) times probable to use LARC compared to merchants. Hence, maternal education and occupation were the independent predictors of LARC utilization as the principal findings of this study.
Conclusions: Enormous extent of unmet need exist in utilization of LARC within the study area. Mothers' age and occupation were significantly associated with its utilization. Therefore, health promotion activities on the benefits of LARC need to be undertaken to increase awareness and usage of these contraceptives.

Keywords: Long acting reversible contraceptives, Married women, Areka town, Utilization

INTRODUCTION

Contraceptive use has increased worldwide over the last decade. Yet, Africa like many other regions of the developing world continues to have a high unmet need for family planning. Approximately 25 percent of women and couples in sub-Saharan Africa who want to space or limit their births are not using any form of contraception. More than half of the people in Africa are younger than 25 years old, so unmet need is expected to increase as these individuals enter their reproductive years.[1]

Long-acting and permanent contraception's are Family Planning (FP) methods providing pregnancy protection for more than one year leaving the user free from any further responsibility and function for a long period of time once applied. They include the Intrauterine Contraceptive Devices (IUCD), implants, female sterilization or Tubal Ligation (TL) and male sterilization or vasectomy.[2,3]

Family planning services that provides accurate and complete information about contraceptive methods meets

the need of their clients. Still, early marriage and producing too many children, which are close to each other is a common practice of developing countries including Ethiopia. The Ethiopian reproductive health strategy set provision of all family planning methods with special emphasis on long term and permanent methods of contraception, which are the most effective contraceptives, can substantially reduce the high levels of maternal mortality and morbidity as well as unwanted pregnancies and unsafe abortion. So, long acting family planning is used as a key strategy of achieving one of its primary goals of reducing unwanted pregnancies and enabling individuals to achieve their desired family size.[4]

Statement of problem

From the perspectives of unmet need for family planning; long acting contraceptives are more useful for spacing and limiting than short acting. However, currently utilization is about 27% in married women for using modern contraception methods in Ethiopia. In 2011 Ethiopian demographic and health survey (EDHS) the Utilization of IUD and Implant was reported as 2.1% and 3.4% respectively. In northern part of Ethiopia (Tigray region) the utilization of long acting reversible contraceptive is 2.1% for IUD and 5.6% for Implanon.[5]

Unmet need for Long-Acting Contraception methods remains high, for healthy timing and spacing of pregnancies, and hence limiting family size; thus, a range of effective methods are needed. Demand, access and use of Long-Acting Contraception methods has lagged behind, despite high effectiveness and popularity among users.[6]

Determining the utilization and unmet need for long acting contraceptive methods indicates demand for contraception by indicating potential users of it. It is known that the acceptability of contraceptive method is fundamental to consistent use and to continue utilization. If a woman is unhappy with the contraceptive method, for whatever reason, she is likely to discontinue the method. Thus, acceptance determines effective use and continuity of the chosen contraceptive method. Low acceptability of long acting reversible contraceptive could have its own effect on the high unmet need of contraception's. Even though short acting contraceptive methods are mainstays of women's contraceptive choices, they have lower continuation rates and higher pregnancy rates than long acting reversible contraceptives.[1,7]

Justifications of the study

Hence, it is necessary to understand the utilization of Long-Acting reversible women's contraceptive methods in Ethiopia to ensure accessibility and use of more effective contraceptives.[2] Yet there was no significant study documented in the utilization of and factors associated with Long-Acting family planning methods in Areka town. Thus, this study assessed the utilization and factors associated with long-acting reversible family planning methods among married women in Areka town, Southern Ethiopia 2015.

METHODS

Study area and period

Study conducted in southern nation nationalities people region (SNNPR), Areka town, to determine the level of utilization of long acting reversible family planning methods among married women in the study area. Areka town is located in 329 kms south from Addis Ababa the capital city of Ethiopia. The study period was from May to June, 2015.

There are six governmental health centres, and two private clinics and one hospital in the study area. Family planning services are performed in all health facilities including hospital and health centres of the governments and private health clinics in the study area, Areka town.[8]

Source and study population

Source population was all married female (15-49) in Areka town and study population were all selected married females within picked kebeles in the town.

Study design

Community based cross sectional study was conducted in SNNPR, Areka town (one of three town administrations in Wolaita zone).

Sampling and sample size determination

Sample size was determined by single population proportion formula, that is, $n = (Z_{1-\alpha/2})^2 P(1-p)/d^2$, where; n=minimum sample size, Z is the level of significance corresponding to 95% confidence interval (1.96), p=anticipated value (Prevalence of long acting contraceptive methods was 7.3% from studies conducted in Jinka town, Southern Ethiopia: a cross sectional study) and d= desired absolute precision which was taken as 4%. Then sample size was calculated as 357 with design effect and none response rate of 2 and 10%.

Simple random sampling technique was used to find kebele; there were six kebeles in the Areka town, two kebeles were randomly selected from town. The sample sizes for each of the selected kebeles were determined proportionally to the size of the household (HH).When eligible HH had two or more than two women of married in reproductive age group, one was selected randomly. Then systematic random sampling technique was employed to select women from subsequent HH. If the selected HH didn't had at least one married woman of reproductive age group, it was skipped to the next HH and the same procedure had taken place until our proposed sample size.

Data collection

Data collections were conducted through structured and pretested questionnaire from selected eligible married female in the selected households. Data were entered, cleaned, and analysed in SPSS version 16.

Inclusion criteria

Women of married (reproductive age) who live in Areka town in the study period were included.

Exclusion criteria

Women who were ill at the time of study period were excluded from the study. Unmarried women and age > 49 or <15years and/or Not permanent residents were also excluded.

Study variables

Dependent variable: Use of long acting reversible contraceptive methods.

Independent variables

Demographic and socioeconomic variables: Age, Marital status, Ethnicity, Educational status of mother and husband, Occupation of mother and husband, and Religion.

Variables related with reproductive history: Number of pregnancies, History of births, Plan for future fertility, anti natal care (ANC) attendance and counselling at ANC visit.

RESULTS

The participants of 357 women interviewed, majorities were in age group 26-36 (62.5%) and the least stature were 15-25 (17.4%) with median (IQR) age of 30 (27 up to 35) respondents. Mainly or 218 (61.1%) and slightest schooling 28 (7.8%) of women were completed primary education and vocational school. Generally, 121 (33.5%) of mothers were house wife and 116 (32.5%) were government employs (Table 1).

The study participants were multi in characteristics of their reproductive behavior, particularly with their future fertility, number of pregnancy, and history of births. The plan for the future fertility accounts 76 (21.3%), 114 (32.4%), and 162 (45.4%) for charitable birth of 1 up to 2, 3 up to 4 and ≥5 children in future respectively. The history of birth does also share on crest of reproductive characteristics as 133 (37.3%), 180 (50.4%) and 44 (12.3%) in favour of 1 up to 2, 3 up to 5 and ≥6 children had in past respectively (Table 2). Mother attend for the ANC in the study area as 208 (58.3%) of the study population (Figure 1).

Table 1: The Sociodemographic characteristics of participants.

Variables		Frequency	%
Age	15-24	45	12.5
	25-34	198	55.5
	>=35	114	31.9
Religion	Catholic	72	20.2
	Protestant	148	41.5
	Orthodox	118	33.1
	Muslim	19	5.3
Mothers ethnicity	Wolaita	249	69.7
	Gurage	28	7.8
	Hadiya	40	11.2
	Kambata	40	11.2
Mothers occupation	Merchant	96	26.9
	Government employ	116	32.5
	House wife	121	33.9
	Student	14	3.9
	Daily labour	10	2.8
Women education	Illiterate	35	9.8
	Primary	218	61.1
	Secondary	36	10.1
	Vocational	28	7.8
	University	40	11.2

Table 2: Reproductive characteristics of the participants.

Variables groups		Frequencies	%
Plan for future fertility	1-2	76	21.3
	3-4	114	32.4
	>=5	162	45.4
Number of pregnancies	1-3	200	56.0
	4-6	134	37.5
	>=7	23	6.4
History of births	1-2	133	37.3
	3-5	180	50.4
	>=6	44	12.3
ANC attendance	Yes	208	58.3
	No	149	41.7

Generally 281 (78.7%) of the interviewed women were using family planning, both short and long acting contraceptive methods in the study area. Of the participants 106 (29.7%) were using long acting family planning expressly implant (22.7%) and Intra uterine devices (IUCD) (7.0%) in the study area (Table 3).

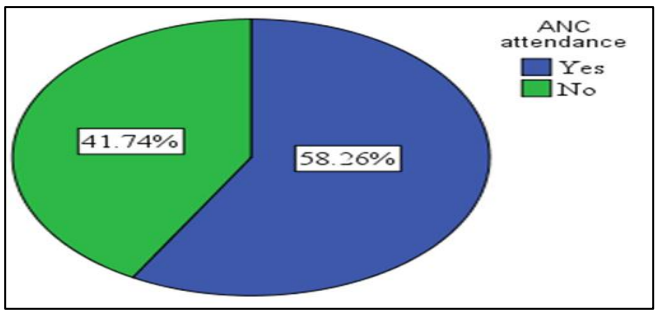

Figure 1: Antenatal care attendance (ANC) in last pregnancy within Areka town, 2015.

Table 3: Participant's characteristics on usage of family planning.

Classification of family planning	Exposure	Frequency	%
Users of FP	Yes	281	78.7
	No	76	21.3
Users of RLAFP	Yes	106	29.7
	No	251	70.3
Users of implant	Yes	81	22.7
	No	276	78.3
Users of IUCD	Yes	25	7.0
	No	332	93

Table 4: Predictors of long acting reversible family planning utilization in Areka Town.

Variables (n=357)	Use of RLAFP		Crude OR(CI)	Adjusted OR(CI)
	No (%)	Yes (%)		
Age				
15-24	38(84.5)	7(15.5)	1	1
25-34	92(80.7)	22(19.3)	3.455(1.47-8.13)	3.996(1.53-10.46)*
>=35	121(61.2)	77(38.8)	1.298(0.51-3.29)	2.658(0.85-8.32)
ANC attendance				
No	117(78.5)	32(21.5)	1	1
Yes	134(64.4)	74(35.6)	2.019(1.25-3.27)	1.328(0.72-2.65)
Mothers education				
Illiterate	30	5	1	1
Primary (1-8)	53	22	2.491(0.85-7.2)	3.145(0.98-10.11)
Secondary (9-12)	47	21	2.876(1.06-7.79)	1.945(0.65-5.84)
College/university	121	58	2.681(0.91-7.87)	1.183(0.35-4.02)
Mothers occupation				
Merchant	8(80)	2(20)	1	1
Government employ	76(79.2)	20(20.8)	2.588(1.40-4.79)	2.814(1.26-6.31)*
House wife	11(88.6)	3(21.4)	1.485(0.80-28)	1.549(0.78-3.09)
Student	87(72)	34(28)	1.036(0.26-4.07)	2.505(0.47-13.39)
Daily labour	69(60)	47(40)	0.95(0.19-4.83)	1.035(0.17-6.39)
FP counseling at delivery				
No	70	19	1	1
Yes	175	87	1.832(1.04-3.23)	1.042(0.51-2.13)

The participants incorporated about 251 (70.3%) not use LARC methods and 106 (29.7%) were using the indicated family planning methods in the study area (Figure 2). There had variables used to see whether there were any statistical association with outcome variable. Of the entire variables initially supposed maternal age and maternal occupation were significantly associated with utilization of LARC in the study area. After controlling all confounders the odds of using LARC was (AOR=2.47 at 95%CI (1.24-4.90)) times likely for 26 up to 36 years aged mothers when compared to 15 up to 24 years aged. Respondents who were government employ were (AOR=2.588 at 95%CI (1.39-4.79) times highly using LARC when compared to merchants (Table 4).

DISCUSSION

The finding describes the level of utilization of family planning in broad and long acting reversible contraceptive method in particular. Generally 281 (78.7%) of mother were users of family planning from the respondents. The finding was comparable with report from another similar study from Amhara region, reported as 406 (78.2%) among interviewed individuals.[9] But, LARC utilization was 106 (29.7%) of mothers in the area where this study conducted. Exclusively, 81 (22.7%) and 25 (7.0%) implants and IUCD had been used by participants. The findings were in line with a report from United States of America, reported as utilization of IUCD as 7.9% and 24.1 % of participants were utilized implants as LARC.[10]

The study participants were characterized elsewhere in the result section in facet. Mothers age was summarized with median (IQR) age as 30 (27 up to 35) in years. The median was because age didn't attained normal distribution within the participants. As indicated else, Protestants 148 (41.5%), Orthodox 118 (33.1%), Catholic 72 (20.2%) and Muslim 19 (5.3%) of religion aspect. By their ethnicity, contestants were Wolaita 249 (69.7%), Gurage 28 (7.8%), Hadiya 40 (11.2%) and Kambata 40 (11.2%) as per their Sociodemographic characteristics. Moreover, there were variables including reproductive characteristics and indicated sociodemographic characteristics (religion and ethnicity) which hadn't statistically associated (P-value< 0.05) with LARC in bivariate analysis. Thus, those variables not had statistically significant association at 95% confidence level were excluded from the final report of multivariate analysis model in agreement with related studies.[1-13]

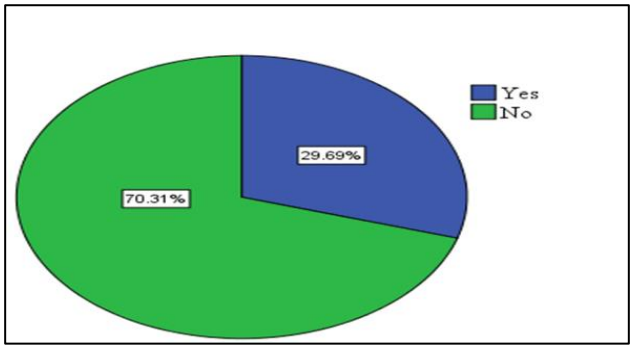

Figure 2: Reversible long acting family planning utilization in Areka town.

The advanced missions of this study were disclosing factors associated with LARC in the study area. The study concerns/mothers had used LARC were in statistically significant associations with their age. Those mothers who had the age group of 26 up to 36 was (AOR=3.99 at 95% CI (1.53-10.46)) times likely used LARC when compared to 15-25 age group. The finding counters report from Debre-Berhane, reported as (AOR=1.18 at 95%CI (0.84-1.66)), implies lack of association with age of mothers.[14] But, the finding of this study was in line with finding from another study in North West Ethiopia, with p-value of < 0.005 as of independent predictor by means of similar comparison.[15] The trifling disparities in findings were due to small variations in age group classifications with different mastermind. However, tolerable verdict was maternal age had statistically significant association with LARC utilization in this inclination.[9,15]

Mother attends ANC for 58.3% of the study population/participants. The figure indicates that immense number of mother had ANC attendance not comparable to 22.4% attendance of similar study[13]. Both, this and other indicated study reported as the variable hadn't statistically associated to use of LARC in different study area. But, ANC was considered to be a global health system approach to increase family planning service utilization through improving the health behaviours of the woman. ANC attendance efficiency were related to service provision in facilities in extent of changing behavior of client.[16,17] This study reports, ANC attendance and counselled regarding family planning was significantly associated with P-value of 0.001. Thus, lack of significance would be due to commonly practiced counselling to open (short acting, and Long acting's (reversible and irreversible), but this study focused on LARC specially.

The participated mother had alliance by means of occupation to LARC utilization. The statistical association was (AOR=2.81 at 95%CI (1.26-6.31)) times highly for government employs compared to Merchants. The finding agrees with report from Debre Markos and Adigrat town in that there was statistically significant association with LARC utilization and maternal occupation in general. But, the difference was within specific categories interchange. Government employs were (AOR=0.4 at 95%CI (0.23, 0.81)) less likely to use LARC when compared to house wife in study from Tigray region.[18] Students were (AOR=6.09) times likely to use LARC when compared to merchants for Debre Markos study.[12] The difference in reports beyond gross association may probably be explained by the puzzling of being student and government employed at the same time in the study area. The ground of the expression was, 35 (30.2%) of the participants were students and government employs who were declared as government employs in this study.

CONCLUSION

The study had demonstrated the overall utilization level of LARC and also, explicitly implant and IUCD had account unmet need in the study area. Even though the majority of reproductive aged women had information regarding family planning, significantly higher women still didn't utilize the LARC. Thus, enormous participants were using family planning in general, but the extent becomes slighter for usages of LARC. Specifically, users of LARC were used implant in large and IUCD utilization was negligible. The indication would be lack of adequate knowledge able to change intrinsic and/or negatively acquired behavior of mothers regarding LARC. The independent predictor variables of utilization of LARC were identified as maternal age and maternal occupation, from various sociodemographic and reproductive character variables supposed in this study.

Recommendations

- More health information should be provided through Behavioral change communication.
- Family planning education/LARC should be incorporated in current government strategy of adult education in district and kebele level. Health promotion activities on the benefits of LARC must

be undertaken to increase awareness. Working in collaboration with non-governmental organizations and local community organizations should be essential to satisfy unmet need and to resolve indicated predictors

- Furthermore, studies should be done to produce evidence focused regarding the quality of LARC service provision in the primary health facilities to identify the summative effect of utilization.

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