

Reversible Long Term Contraceptives Utilization among Married Women of Reproductive Age Group in Areka town, South Ethiopia

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Abstract

Background: In low income countries, maternal mortality rate remains high. Bearing many children is the main factor affecting maternal health. This study aimed to estimate the prevalence of reversible long term contraceptives utilization and identify factors associated with it among married women of child bearing age in Areka town in South Ethiopia

Methods: We did a community-based cross-sectional survey involving systematically recruited 346 married women of reproductive age group. Data was collected using a structured interviewer-administered questionnaire on May 2019. We used SPSS version 25 for data entry and analyses. Bivariate logistic regression analysis was used to select exposure variables with a crude association. Multivariate analysis was done to control for potential confounders and identify predictors of the outcome. Adjusted Odds Ratio (AOR) with 95% Confidence Interval (CI) was reported and statistical significance was declared at $p < 0.05$.

Results: The prevalence of reversible long term contraceptives utilization among married women of reproductive age group was 38.7% in the study area. Utilization of reversible long term contraceptives was positively associated with being Protestant Christian religion follower (AOR=5.33; 95% CI: 1.63, 17.40), advanced educational status (AOR=5.78; 95% CI: 1.97, 17.02), history of abortion (AOR=7.17; 95% CI: 2.81, 18.27), and having a better attitude towards reversible long term contraceptives (AOR=2.85; 95% CI: 1.46, 5.57). Whereas, being a housewife (AOR=.27; 95% CI: .09, .79) and daily laborer (AOR=.14; 95% CI: .02, .80), having no radio in the household (AOR=.40; 95% CI: .16, .99) and making fertility decisions alone (AOR=.12; 95% CI: .04, .37) were negatively associated.

Conclusion: Women should be empowered educationally through other alternative opportunities to school. On top of electronic media, other alternative media should be used to convey messages on contraceptives particularly RLTCs. Behavioral change communications would benefit women in shaping their attitudes towards RLTCs.

Background

Maternal mortality remains high in most low-income countries. Africa is the region with the highest maternal mortality ratio and Ethiopia is one of the countries which contributed to this high maternal mortality ratio (401 deaths per 100,000 live births) (1). Bearing many children is among the factors which affect maternal health status. Ethiopia is the second most populous country in Africa with a fertility rate of 4.3 (2).

Globally, 190 million women want to avoid pregnancy and do not use any contraceptive method and only 19% of women rely on Reversible Long Term Contraceptives (RLTC). In sub Saharan Africa, short acting contraceptive methods are most commonly used methods (3). Only 41% of currently married women use modern methods of family planning and only 11% are using reversible long term contraceptives (4).

Despite regional disparities in RLTCs utilization, the documented prevalence across Ethiopia ranges between 12.9% and 38% (5, 6).

Evidences show that different factors hinder the utilization of RLTCs. Age, contraceptives knowledge, number of pregnancy, desire for more children, educational status, number alive of children, duration of family planning, spousal/partner support, ever use of RLTCs, fear of side effects and source of contraception are some of the reported barriers.

Ethiopia, in the Health Sector Transformation Plan (HSTP V), planned to reduce maternal mortality from 420 to 199 by the end of the year 2020(7). This cannot be achieved without increasing the prevalence of contraceptive utilization, particularly RLTCs. Since there are regional variations in the prevalence and factors associated with RLTCs, evidences are required for appropriate interventions. Thus, this study is aimed at determining the prevalence of RLTCs utilization and identifying factors associated with it.

Methods

Study setting

Areka town is one of the seven town administrations in Wolaita zone, south Ethiopia. It is located at 329 km south from Addis Ababa. The town is administratively structured into 4 kebeles (lower administrative structure) and it has a total population of 33,150 (8). One private hospital, one health center, and seven private clinics provide family planning and other health services to the population in the town.

Study design and period

A community-based cross-sectional study was conducted in Areka town from May 1 to May 30, 2019.

Population and sampling

The source population was all married women age 15 to 49 in the town. Systematically recruited 346 mothers were included in the study. Women with a known history of infertility or who use non-reversible contraception were excluded from this study.

A sample size of 352 was calculated using a single population proportion formula with the following assumptions; 95% confidence level, 5% margin of error, an estimated prevalence of 29.7% taken from similar study in south Ethiopia (9) and 10% non-response rate. Out of 4 kebeles, 2 kebeles were selected randomly and the total sample size was allocated to the selected kebeles proportionally. Households were selected systematically and if the selected household has more than one eligible woman, one was selected randomly.

Measurements

Eight questions were asked to assess women's knowledge about reversible long term contraceptives. The questions had five Likert scale responses; "Strongly disagree", "Disagree", "Not sure", "Agree" and "Strongly agree". A single variable was established by creating a total score from the questions. Women were categorized as having 'good knowledge' or 'poor knowledge' based on the mean score. Women with a score above the mean were labeled as having "better knowledge", whereas those with a score of the mean or below were labeled as having "poor knowledge".

Similarly, to assess women's attitude towards reversible long term contraceptives, they were asked six Likert scale questions. Women with a score above the mean were categorized as having a "better attitude", whereas those with a score of the mean or below the mean were categorized as having "poor attitude".

Data collection

Data were collected using a structured interviewer-administered questionnaire. The questionnaire was prepared after reviewing relevant articles and literature. The questionnaire was translated to the local language by fluent speakers of both languages and it was pretested in 18 respondents which were not included in the main study. Data collectors with prior experience of data collection were recruited and trained for two days on the data collection tool and ethics.

Statistical analysis

Data were entered, cleaned and analyzed by using SPSS version 25. Descriptive statistics were computed for all variables. Binary logistic regression analysis was used to select exposure variables with a crude association to the outcome variable. Hosmer-Lemeshow good-of-fit test was carried out to have confidence in the regression model. Collinearity was diagnosed, and there was no multicollinearity among the exposure variables included in the model. On bivariate analysis, a yardstick cut-off point of p-value less than 0.25 was taken to select candidate variables for multivariate analysis. Multivariate analysis was done to control for potential confounders and identify predictors of the outcome. Adjusted Odds Ratio (AOR) with 95% Confidence Interval (CI) was reported and statistical significance was declared at p-value < 0.05.

Results

Socio-demographic characteristics

Three hundred forty six women were involved in this study with a response rate of 98.3%. Over three fourth (261, 75.4%) were aged 20–35 years and 183(52.9%) were Protestant Christian religion followers. Seventy-six (22.0%) women and 56(16.2%) husbands did not attend formal education. More than half (189, 54.6%) of the women were housewives whereas 150(43.4%) of husbands were government/non-governmental organization (NGO) employees. The majority (194, 56.1%) of households had an average monthly income of less than 1500 Ethiopian Birr (ETB). More than half (187, 54.0%) of the households had radio and 246(71.1%) had a television Table 1).

Table 1 Socio-demographic characteristics of married women and their husbands at Areka town in South Ethiopia, May 2019

Variables (n = 346)		Frequency	Percent
Age (in years)	< 20	19	5.5
	20–35	261	75.4
	> 35	66	19.1
Religion	Orthodox	97	28.0
	Muslim	35	10.1
	Protestant	183	52.9
	Others	31	9.0
Educational status of women	No formal education	76	22.0
	Primary school (1–8)	139	40.2
	Secondary and above	131	37.8
Educational status of husbands	No formal education	56	16.2
	Primary school (1–8)	81	23.4
	Secondary school (9–12)	82	23.7
	College and above	127	36.7
Occupation of women	Government/NGO employee	50	14.5
	Merchant	83	24.0
	Housewife	189	54.6
	Daily laborer	24	6.9
Occupation of husbands	Government/NGO employee	150	43.4
	Merchant	109	31.5
	Daily laborer	48	13.9
	Other	39	11.3
Household income (ETB)	< 1500	194	56.1
	1500–3000	62	17.9
	> 3000	90	26.0
Have radio in the household	Yes	187	54.0
	No	159	46.0
Have television in the household	Yes	246	71.1

Variables (n = 346)	Frequency	Percent
No	100	28.9

Reproductive health characteristics, knowledge and attitude of women

One fourth (88, 25.4%) of the women gave birth to more than five children. Nearly three fourth (256, 74.0%) had no history of abortion and 202(58.4%) had a desire for future fertility. The majority (191, 55.2%) of the couples decide on future fertility jointly. More than half (182, 52.6%) of the women had better knowledge whereas 154(44.5%) had a better attitude about RLTC (Table 2).

Table 2 Reproductive characteristics, knowledge and attitude of women involved in the study at Areka town in South Ethiopia, May 2019

Variables (n = 346)		Frequency	Percent
Parity	Nulliparous	14	4.0
	1-2	78	22.5
	3-5	166	48.0
	6+	88	25.4
History of abortion	Yes	90	26.0
	No	256	74.0
Future fertility desire	Yes	202	58.4
	No	144	41.6
Decision maker on future fertility	Wife	55	15.9
	Husband	100	28.9
	Jointly	191	55.2
Knowledge about RLTC	Good	182	52.6
	Poor	164	47.4
Attitude on RLTC	Good	154	44.5
	Poor	192	55.5

Prevalence and predictors of RLTC utilization

The prevalence of RLTC utilization among married women in this study was 38.7% (134/346). Protestant religion followers had about five times higher odds of using RLTC (AOR = 5.33; 95% CI: 1.63, 17.40).

Women who attended primary education were six times more likely to use RLTCs (AOR = 5.78; 95% CI: 1.97, 17.02), whereas those who attended secondary education and above were seventeen times more likely to use RLTCs (AOR = 16.69; 95% CI: 4.62, 60.31) compared to those with no formal education. The odds of utilizing RLTCs decreases by 73% for housewives (AOR = .27; 95% CI: .09, .79) and by 86% for daily laborers compared to government and NGO employees (AOR = .14; 95% CI: .02, .80).

The odds of using RLTCs decreases by 60% for women who don't have a radio in the household (AOR = .40; 95% CI: .16, .99). Women who had a history of abortion were seven times more likely to use RLTCs (AOR = 7.17; 95% CI: 2.81, 18.27). On the other hand, women who decide alone on future fertility were 88% less likely to use RLTCs compared with those who decide jointly (AOR = .12; 95% CI: .04, .37). Women with a better attitude about RLTCs are three times more likely to utilize RLTCs (AOR = 2.85; 95% CI: 1.46, 5.57) (Table 3).

Table 3

Factors associated with reversible long term contraceptive utilization in Areka town, South Ethiopia, May 2019

Variable (n = 346)	RLTC utilization		COR (96% CI)	AOR (95% CI)
	Yes	No		
Religion				
Muslim	11(31.4)	24(68.8)	1	1
Orthodox	45(46.4)	52(53.6)	1.89(.83, 4.28)	1.02(.29, 3.65)
Protestant	69(37.7)	114(62.3)	1.32(.61, 2.86)	5.33(1.63, 17.40)**
Others	9(29.0)	22(71.0)	.89(.31, 2.56)	2.95(.67, 13.09)
Education of women				
No formal education	9(11.8)	67(88.2)	1	1
Primary school (1–8)	52(37.4)	87(62.6)	4.45(2.05, 9.67)	5.78(1.97, 17.02)**
Secondary and above	73(55.7)	58(44.3)	9.37(4.31, 20.37)	16.69(4.62, 60.31)**
Occupation of women				
Gov't/NGO employee	27(54.0)	23(46.0)	1	1
Merchant	49(59.0)	34(41.0)	1.23(.61, 2.49)	1.40(.45, 4.38)
Housewife	51(27.0)	138(73.0)	.32(.17, .60)	.27(.09, .79)**
Daily laborer	7(29.2)	17(70.8)	.35(.12, .99)	.14(.02, .80)**
Occupation of husbands				
Gov't/NGO employee	74(49.3)	76(50.7)	1	1
Merchant	36(33.0)	73(67.0)	.51(.30, .85)	.47(.14, 1.56)
Daily laborer	7(14.6)	41(85.4)	.18(.07, .42)	.20(.04, 1.11)
Other	17(43.6)	22(56.4)	.79(.39, 1.61)	.65(.13, 3.31)
Household income				
< 1500	59(30.4)	135(69.6)	1	1
1500–3000	29(46.8)	33(53.2)	2.01(1.12, 3.61)	2.22(.70, 7.06)
> 3000	46(51.1)	44(48.9)	2.39(1.43, 4.00)	1.17(.37, 3.73)
Radio in the household				

Variable (n = 346)	RLTC utilization		COR (96% CI)	AOR (95% CI)
	Yes	No		
Yes	66(35.3)	121(64.7)	1	1
No	68(42.8)	91(57.2)	1.37(.89, 2.12)	1.52(.77, 3.01)
Have television in the HH				
Yes	101(41.1)	145(58.9)	1	1
No	33(33.0)	67(67.0)	.71(.43, 1.15)	.40(.16, .99)**
Parity				
Nulliparous	5(35.7)	9(64.3)	1.10(.35, 3.47)	.54(.08, 3.45)
1–2	28(35.9)	50(64.1)	1.12(.62, 2.00)	.50(.19, 1.32)
3–4	56(46.7)	64(53.3)	1.73(1.04, 2.87)	1.52(.67, 3.45)
5+	45(33.6)	89(66.4)	1	1
History of abortion				
Yes	14(15.6)	76(84.4)	.21(.11, .39)	7.17(2.81, 18.27)**
No	120(46.9)	136(53.1)	1	1
Decision maker on fertility				
Wife	13(23.6)	42(76.4)	.58(.35, .96)	.12(.04, .37)**
Husband	33(33.0)	67(67.0)	.36(.18, .72)	.77(.34, 1.78)
Jointly	88(46.1)	103(53.9)	1	1
Knowledge about RLTC				
Good	49(26.9)	133(73.1)	.34(.22, .54)	1.02(.46, 2.27)
Poor	85(51.8)	79(48.2)	1	1
Attitude about RLTC				
Good	40(26.0)	114(74.0)	.37(.23, .58)	2.85(1.46, 5.57)**
Poor	94(49.0)	98(51.0)	1	1

Discussion

This study documented that about 38.7% of married women in the reproductive age group use RLTCs. We observed higher prevalence in the current study as compared to similar studies in Ethiopia, Indonesia and

elsewhere (5, 6, 10–13). This difference might be due to the socio-demographic variability in the study areas, where all of our study participants were from urban who might have more access to family planning information. A comparable prevalence was reported from Eastern Ethiopia (14).

Protestant Christian religion followers had much higher odds of using RLTCs as compared to their Muslim counterparts. This finding is supported by a study conducted in Nigeria, where the use of contraceptives was significantly lower among Muslim women as compared to women from other religions (15). This might be due to the belief that contraceptives use contradicts with Islam teaching because Islam encourages Muslims to give birth to many children (16, 17). Another possible reason is that polygamy is permitted in Islam and most of the women in polygamous marriage believe that they can win the attention of their husband's when they often get pregnant for him(18).

In consistence with studies from different parts of Ethiopia and Zambia, RLTC utilization increased with advanced educational status (6, 19–21). This might be because advanced educational status increased the aware of women on the benefits of RLTCs. The decision making power is also higher for women with a better education. A different finding was reported from Indonesia, where no significant association was reported between educational status and RLTCs utilization (13). This difference might be due to the small sample size used in the above study.

The utilization of RLTCs was lower for housewives and daily laborers in comparison to government or NGO employees. This finding is consistent with other studies from Ethiopia where government employees were more likely to utilize RLTCs (11, 22). The possible explanation might be that government and NGO employees have a better educational status and in turn better access to information.

In consistence with studies in Ethiopia and central Asia, the utilization of RLTCs was lower for those who do not have a radio in the household compared to their counterparts (11, 23). The possible reason might be that listening to family planning messages through electronic media had improved the chance of using RLTCs (24).

We observed that women with a history of abortion had higher odds of using RLTCs. Similarly, a study from Angola reported that women with a history of abortion were more likely to use modern family planning compared to women who never had an abortion(25). The possible reasons might be access for LTRCs and health education given at health facilities as part of post-abortion care (PAC).

Compared to women who decide jointly with their partners, women who decide alone on fertility had lower odds of using RLTCs. This was in agreement with studies in Ethiopia, Zambia, and Uganda, where women who discuss with husbands were more likely associated with RLTCs utilization (10, 11, 26–30). Women with a better attitude towards RLTCs had much higher odds of using RLTCs than their counterparts. This finding is consistent with other studies from Ethiopia (26, 31, 32).

Limitations of the study

We used cross-sectional data and a cause-effect relationship could not be measured.

Conclusion

Women should be empowered educationally through other alternative opportunities to school, for the reason that it would or would not be possible to bring all married women to school. On top of electronic media, other alternative media should be used to convey messages on contraceptives particularly RLTCs. Programs working on contraceptives utilization should also encourage spousal communication. Behavioral change communications would benefit women in shaping their attitudes towards RLTCs.

Declarations

Ethics approval and consent to participate

Ethical clearance for the study was obtained from the Ethical review committee at the College of Health Science and Medicine in Wolaita Sodo University in Ethiopia. The ethical clearance letter was written to the Wolaita zone health department. Permission to conduct the study was granted from the Wolaita zone health department and Areka town health office. Finally, informed written consent was taken from the study participants.

Consent for publication-Not applicable

Availability of data and materials

The dataset analyzed for this study is available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

SK and TL conceived the study, designed the protocol, coordinated data collection, analyzed the data, and interpreted the findings. SK drafted the manuscript and TL reviewed the progressive draft manuscript. Both authors read and approved the final version of the manuscript.

Authors' information

SK is a human nutritionist by training. He is a lecturer at the School of Public Health at WSU. TL is a reproductive health specialist by training. He is a lecturer at the School of Public Health at WSU.

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Abbreviations

AOR: Adjusted Odds Ratio; CI: Confidence Interval; COR: Crude Odds Ratio; ETB: Ethiopian Birr; NGO: Non-Government Organization; PAC: Post Abortion Care; RLTC: Reversible Long Term Contraceptives; SPSS: Statistical Package for Social Science; WSU: Wolaita Sodo University

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