

# Determinants of Modern Contraceptive Utilization among Women of the Reproductive Age Group in Dawuro Zone, SNNPR, Southern Ethiopia

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## Abstract

**Background:** Globally, modern contraceptive service utilization has been increasing through not evenly by different regions of the world. It is well practiced by developed countries. However, low utilization of contraception is evident in most developing countries especially sub-Saharan Africa countries recording the lowest level of contraceptive prevalence rate in the world. Ethiopia is one of the most populous countries in Africa. The total fertility rate in the country is 4.1 and the population growth rate is 2.6%, which is still very high (1, 2). Only 42% of women in the reproductive age group are currently using modern contraceptives, which is low to affect fertility. One of the strategies to reduce maternal morbidity and mortality is to avert high risk pregnancies through the use of effective and appropriate family planning methods. It has been suggested that about 35 percent of maternal deaths could be eliminated if all women and men had access to contraceptives to prevent unwanted pregnancies (2). **Objective:** The aim of this study was to assess factors influencing the utilization of modern contraceptives among women in the reproductive age group in Loma and Mareka district of Dawuro Zone, SNNPR, Ethiopia. **Methods:** Institution based un-matched case-control study was employed from March 1-30, 2016; in which six health facilities were selected from the existing nine health facilities in the district using the random sampling method. The target population was women in the reproductive age group (15-49 years). Two hundred and eighty five registered modern contraceptive users (cases) from the selected six health facilities and the same number of women not using modern contraceptives (controls), visiting the same health facilities for reasons other than family planning service were included in the study by simple random sampling technique. Data analysis was done by using statistical package for social science (SPSS) software version 20.0. The study was approved by the institutional research and ethics committee of Wolaita Sodo University, Ethiopia. **Results:** Five hundred seventy women were involved in the study making the response rate 100%. Utilization of modern contraceptives among women in the reproductive age group was 32% among cases and 28% among controls in the study area. Among the variables analyzed, respondents' educational status, number of living children in the household, desire for more children and discussion with husband on importance of contraceptive use were the socio-demographic variables that showed significant difference between the two study groups ( $p < 0.05$ ). **Conclusions:** It is concluded from this study that modern contraceptive utilization is associated with socio-economic factors like educational status, number of living children, desire for more children and discussion about family planning with their husbands. **Recommendations:** Based on the findings of the study, it is recommended to enhance planned IEC using mass media and health institutions.

**Keywords:** modern contraceptive utilization, women in the reproductive age group (15-49), case control study, Dawuro zone, Ethiopia.

## Introduction

Globally, modern contraceptive service utilization has been increasing though not evenly by different regions of the world. It is well practiced by developed countries. However, low utilization of contraception is evident in most developing countries especially sub-Saharan Africa countries recording the lowest level of contraceptive prevalence rate in the world. Ethiopia is one of the most populous countries in Africa; only 42% of women in the reproductive age group are currently using contraceptives, which is still low to affect fertility. While fertility rates have declined in many nations in the past few decades, rapid population growth is projected to continue well into the 22<sup>nd</sup> century for most of the nations, especially in the Middle East, Africa and South Asia. Thus, it is crucial to reduce high fertility through a combination of several economic and social sector programs.

Sub Saharan Africa faces the most serious population and reproductive health challenges, including the highest maternal mortality, population growth rate, total fertility rate and much unmet need for family planning in the world. The situation in Ethiopia is still much worse than most African countries. In spite of the fact that, family planning service delivery facilities and other supplies have increased much in number in the country; significant portion of the Ethiopian population is still living in abject poverty. The total fertility rate in the country is 4.1, which is still very high when compared with most other African countries (2). The contraceptive prevalence rate is about 42% among women of reproductive age and the population growth rate is 2.6% in the country (2, 3).

Generally, the abovementioned facts indicate the low level of health service utilization in the country

including RH/FP services. Health service utilization can be defined as the number or proportion of the population using health services; which in turn can be related to the number or proportion in need of the services, given the services are available; the factors influencing the utilization of health services ( include need, geographic accessibility, acceptability and affordability) to the consumers are reduced to minimum.

It is believed that information education and communication about the importance of modern contraceptive use play an important role in raising contraceptive prevalence rate. Thus, it can be summarized that modern contraceptive use does not necessarily depend on the knowledge of methods but there are other additional determinant factors that influence the utilization of the service. Most Previous studies have shown that there is a wide gap between knowledge and use of modern contraceptives. Surprisingly, Knowledge about modern contraceptives is relatively high when compared with utilization rate. Therefore this study was aimed to assess factors affecting utilization of modern contraceptives among women of reproductive age group in Mareka and Loma districts, Ethiopia.

**Methods & Materials:** An institution based unmatched case-control study was carried out from March 1-30, 2016 in six health facilities of Mareka and Loma districts, southern Ethiopia. Sample size was calculated by using double population proportion formula based on the parameters:

$$n = \frac{[Z_{\alpha/2} \sqrt{(1+1/r) p(1-p)} + Z_{\beta} \sqrt{p_1(1-p_1) + p_2(1-p_2)/r}]^2}{(p_1 - p_2)^2}$$

Where:  $\alpha$ , is the level of significance = 0.05,  $z_{\beta}$  is the power of the test = 90%, r is the control to case ratio = 1:1,  $p_1$  is the proportion of exposure among non users (controls) = 0.21,  $p_2$  is the proportion of exposure among users (cases) = 0.33, p is the population proportion =  $p_1 + p_2 / 1 + r = 0.27$  The sample size was calculated based on the assumption that education is the major determinant factor for the utilization of modern contraceptives. Epi-Info version 3.5.4 was used to calculate the required sample size. The hypothesis tested stated that there is no significant difference between the cases and the controls in exposure to formal education or there is significant difference between them. 570 women (285 cases and 285 controls) were interviewed by using pre-tested structured questionnaire. Data analysis was done by using SPSS version 16.0. Statistical significance was declared at p-value <0.05.

**Results:** A total of 570 women of reproductive age group (15-49 years) using health services in the selected health institutions were involved in the study making the response rate 100%. Most of the cases and controls were in the 25–29 years age group. Concerning educational status, 42.3% of cases and 30.2% of controls didn't attended formal education, 66.7% of cases and 43.5% of controls attended primary education and 11.6% of cases and 10.5% of controls attended secondary & above education respectively (Table 1).

Five hundred fifty six (97.5%) of the respondents knew modern family planning methods and were able to mention at least one method. The most commonly reported modern family planning methods were pills accounting 80%. Ninety one (32%) of respondents were currently using modern family planning methods (Table 2). Over 90% of both cases and controls knew at least method of modern contraceptives. Injectable family planning method was the most known method of modern family planning in both cases and controls followed by pills. Health workers were the main source of information on family planning in the districts for both cases and controls (Table 3). Desire for more children, number of living children in the family, husband-wife communication about family planning and educational status of women were significantly associated with the use of modern contraceptive methods (Table 4).

**Discussion:** This study revealed that desire for more children, number of living children, husband-wife communication about family planning and educational status of women were significantly associated with the use of modern contraceptive methods. The need for more children was the main reason for not using modern contraceptives in this study. Women who do not desire more children at all were 5 times more likely to use modern contraceptives than those who desire more children. This result is in line with the finding from similar previous studies (6,7,9,12). The finding of this study also showed that women who had discussion about family planning with their husbands were 2 times more likely to use modern contraceptive methods than those who did not discuss with their husbands at all.

This finding is in line with studies conducted in South Sudan, Ethiopia and Pakistan (5,6,7,18). This implies that male involvement has an important role on the use of modern contraceptives.

Educational status of women has significant effect on the utilization of modern contraceptives. Mothers with secondary and above education had 2 times better utilization of modern contraceptives when compared to those with lower education. Similar finding was reported in Ghana and Ethiopia (9,11). The number of living children a woman had was significantly associated with use of modern contraceptive methods. Women who had one or more children were more likely to use modern contraceptives than those who had no children. Similarly,

women who had more than three children were 4 times more likely to use modern contraceptives when compared to those who had no children. This finding is supported by reports from other parts of Ethiopia (9,11). Unlike other studies, age, residence and marital status of respondents didn't show significant difference between the study groups (3,4,6,8). This difference might be due to the difference in socio-demography and difference in study settings.

**Conclusion:** This study revealed that socio-demographic factors such as desire for more children, number of living children in the family, husband-wife communication about family planning and educational status of women were found to be significantly associated with the use of modern contraceptive methods. On the other hand; age, residence and marital status of respondents didn't show significant difference between the study groups.

**Recommendations:** Based on the findings of this study, it is recommended to enhance planned IEC activities regarding modern family planning service utilization using mass media and health institutions.

#### Tables:

Table 1 Socio-demographic characteristics of respondents, Dawuro zone, 2016

Socio-demographic characteristics	Cases		Controls	
	No	%	No	%
<b>Age in years</b>				
15-19	7	2.5	68	22.8
20-24	27	9.5	42	14.7
25-29	77	27	59	20.7
30-34	62	21.8	45	15.8
35-39	74	26	45	15.8
40-44	21	7.4	14	4.9
45-49	10	3.5	15	5.3
<b>Residence</b>				
Rural	217	76.1	207	72.6
Urban	68	23.9	78	27.4
<b>Religion</b>				
Christian	274	96.1	270	94.7
Islam	11	3.9	15	5.3
<b>Education</b>				
No formal education	120	42.1	86	30.2
Primary education	132	66.7	124	43.5
Secondary education	21	7.4	20	7
Tertiary education	12	4.2	10	3.5
<b>Occupation</b>				
House wife	201	70.5	118	41.1
Gov't employee	14	4.9	8	2.8
Student	47	16.5	128	44.9
Daily laborer	17	6	16	5.6
<b>Marital status</b>				
Married	247	86.7	147	51.6
Single	15	5.3	125	43.86
Divorced	23	8.1	13	4.6
<b>Possession of radio</b>				
Yes	217	76.1	207	72.6
No	68	23.9	78	27.4
<b>Possession of TV</b>				
Yes	31	10.9	42	14.7
No	254	89.1	243	85.3

Table 2 Reproductive characteristics of the respondents, Dawuro zone, 2016

Socio-demographic characteristics	Cases		controls	
	No	%	No	%
<b>Number of pregnancies</b>				
<=2	207	72.6	119	41.8
>=3	64	22.5	46	16.1
<b>Number of living children</b>				
<=2	217	76.1	16	4.7
>=3	37	13	33	11.6
<b>Number of live births</b>				
<=2	208	73	107	37.5
>=3	56	19.6	41	14.4
<b>History of abortion</b>				
Yes	8	2.8	8	2.8
No	235	82.5	139	48.8

Table 3 knowledge on modern contraceptive use among respondents, Dawuro zone, 2016

knowledge on modern contraceptive use	Cases		controls	
	No	%	No	%
<b>Decision to use modern contraceptives</b>				
Joint decision	257	90.2	244	85.6
Only wife	14	8.4	28	9.9
<b>Desire for more children</b>				
Yes	217	76.1	16	4.7
No	37	13	33	11.6
<b>Source of information on modern contraceptives</b>				
Health facility	176	63.3	127	44.5
Mass media	22	7.9	30	11.8
<b>Methods known by women</b>				
Injectables	241	84.6	216	75.6
Pills	59	20.7	57	20
Norplant	52	18.2	51	17.9
IUCD	6	2.1	5	1.75
Condom	23	8.1	23	8.1
<b>Use of modern contraceptives</b>				
Yes	91	32	80	28
No	194	68	205	72

Table 4 Multivariate logistic regression table showing factors affecting utilization of modern contraceptives, Dawuro zone, 2016

Factors affecting utilization of modern contraceptives	Modern contraceptives use			
	Cases	Controls	COR (95% CI)	AOR (95% CI)
<b>Level of Education</b>				
No formal education	22	81	1	1
Primary education (1-8)	30	36	1.64 (0.68, 1.45)	1.22 (0.57, 1.83)
Secondary education (9-12)	122	84	7.9 (4.80,9.04)**	4.51 (2.62,6.81)**
Tertiary education (college & above)	56	41	3.70 (2.03, 5.70)**	1.65 (1.02, 2.33)**
<b>Desire for more children</b>				
Yes	69	64	1	1
No	143	84	5.71 (3.82, 7.42)**	5.62 (3.48, 8.60)**
<b>Number of living children</b>				
No child	30	18	1	1
1-3 children	106	118	6.04 (3.36, 11.01)**	2.02 (1.08, 5.54)**
>=4 children	150	137	7.16 (4.80, 10.50)**	4.2 (2.82, 7.52)**
<b>Discussion with husband</b>				
No	92	80	1	1
Yes	106	125	6.42 (4.40, 10.20)**	2.14 (1.42, 2.94)**

\*\* Indicates p-value <0.05 which is considered as statistically significant.

**Acknowledgements:** First and foremost, I thank the Almighty God for giving me strength and wisdom to successfully complete this document. I want to give my sincere appreciation to data collectors, supervisors and participants for their willingness to participate in study.

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