

# Factors influencing contraceptive use among women of reproductive age from the pastoralist communities of Afar, Ethiopia: a community-based cross-sectional study

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## Abstract

**Background:** Contraceptive use is recognized as one of the most cost-effective interventions to reduce maternal and child morbidity and mortality. However, the prevalence of contraceptive use is disproportionately low among women of reproductive age from the pastoralist communities of Ethiopia.

**Objective:** study aimed to assess the factors influencing contraceptive use among women of reproductive age from the pastoralist communities of Afar, Ethiopia.

**Methods:** A community-based cross-sectional study was conducted among 1,978 randomly selected women of reproductive age who had given birth within two years prior to the study. Ten districts, selected by a multistage sampling technique, were included in the study. Five kebeles were randomly selected from each of the 10 districts and then sample size was proportionally allocated to each selected kebele. Households were selected using a systematic random sampling technique. A semi-structured questionnaire was used to collect data on socio-demographic and economic characteristics, reproductive history, and factors influencing for contraceptive use. Data were analyzed using SPSS version 20 software and logistic regression methods. Statistical significance was declared at p-value of less than 0.05.

**Results:** Of the 1,978 respondents, only 149 (7.5%) had ever used modern contraceptives and 107 (5.4%) were current users. The ability to read and write (AOR = 2.4; 95% CI: 1.5-4.1), household asset availability (AOR = 7.9; 95% CI: 3.7-17.0), being the only wife of a husband (AOR = 1.65; 95% CI: 1.1-2.6) and number of children wanted (AOR = 1.1; 95% CI: 1.1-1.2) were significantly associated with current use of contraceptive methods.

**Conclusions:** The proportions of current and ever use for contraceptives are low. Women's educational attainment may able to give opportunity to read about contraceptive use, and it increased possibility of contraceptive use. Women in polygamies marriage are less likely to use contraceptive, which may imply possible computation of wives to bear more children. Interventions aim to send girls for schools and adult women's learning may have promising power to contraceptive use. [*Ethiop. J. Health Dev.* 2018;32(Special Issue):28-33]

**Key words:** Family planning, pastoralist community, Afar region, contraceptive use

## Background

Contraceptive use is recognized as one of the most cost effective interventions to reduce maternal and child morbidity and mortality (1, 2). Besides, the factors influencing the utilization of family planning services in women of reproductive age from settled communities are well described in the literature. Women's age, women's and husband's educational status, number of children couples have, spousal announcement and agreement influences contraceptive use among married women in settled communities(3-8)

However, the use of contraceptive methods in the pastoralist communities is far below the global and national targets and averages (9, 10). Moreover, little is known regarding the factors influencing for the use of contraceptive methods in the pastoralist communities of Afar. There is also little up-to-date empirical evidence to inform better programming of family planning services in the pastoralist communities of Afar.

Thus, the current study was designed to assess the status of contraceptive use and the factors influencing the use among women of reproductive age from the pastoralist communities of Afar using a community based cross-sectional quantitative study. The findings of the current study would benefit women of reproductive age and children from the pastoralist communities of Afar considering that utilization of

contraceptive methods plays an important role in improving maternal and child health. The greater improvement in maternal and child health through improved use of contraceptives justifies the need for context specific and effective interventions on family planning. Thus, communities and health facilities that apply the recommendations derived from the results of this study will be able to provide better family planning services.

## Methods

**Study setting:** Afar region is one of nine national regional states of Ethiopia. It is divided in to five zones, 32 Districts, 5 town administrations having an estimated total population of 1,816,304 consisting of 799,174 (44% females). Eighty seven percent of the population is estimated to be rural and about 85% of the populations are pastoralist or agro-pastoralist and the majority of them are Muslims (11). According to a report from Afar Health Bureau, the region has one regional hospital, 6 zonal hospitals, 78 health centers and 379 health posts (12). The region is characterized by traditional and cultural beliefs which predominantly preclude women from exercising the use of many of the basic services such as education and health services including their own reproductive rights such as the use of family planning methods to limit the number of their children or space their births. Moreover, the social fabric in these communities promotes patriarchal and

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clan based system where men are more influential than women in all aspects of the social life.

**Study design:** A community-based cross-sectional study was employed among women of reproductive age who had given birth within two years prior to the study.

**Study population:** Randomly selected women of reproductive age (15-49 years) who delivered within two year prior to the survey.

**Sample size determination:** Double population formula was used to calculate the minimum sample size required using the following parameters: As the study was part of broader study on RMNCH, sample size was calculated with the proportion that yields maximum sample size, which was 1978 by suing the proportion of women who gave birth at a health care facility in Afar region (6.4%) (13). A confidence level of 95%; 80% power of a test; ratio of exposed to unexposed women 1:1; odds ratio of 2; and design effect of 2 were used. We added 10% to the calculated sample size to compensate for expected non-response.

**Sampling procedure:** Multistage sampling was applied to select 10 districts in the region. First, two districts per zone were randomly selected from the five zones in the region using a lottery method. Accordingly, Ada'ar and Chifra from zone 1, Megalle and Erebtu from zone 2, Dulecha and Simurobi Gele'alo from zone 3, Yalo and Gulina from zone 4, and Dalifage and Simurobi from zone 5 were selected. Five kebeles were randomly selected from each of the 10 districts and then sample size was proportionally allocated to each selected kebele. Finally, households were selected using a systematic random sampling technique by identifying the center of a kebele. In the case of more than one woman in the selected household, one of them was selected randomly. Data were collected through house-to-house visits.

**Data collection tools, procedures and data quality control:** A semi-structured questionnaire was prepared on the basis of the Ethiopia Demographic and Health Survey 2011 (13) and contextualized to suit the local

setting. It consisted of information on socio-demographic and economic characteristics, reproductive history and factors associated with the use of FP services. It was initially prepared in English, translated into Amharic. The tool was pre-tested on 5% of the sample from communities of a similar setting. Ten experienced and trained data collectors collected the data and interviewed the women at their respective homes, with follow-ups conducted by five supervisors.

**Data analysis:** Data were entered into Epi Data version 3.1 and imported to SPSS version 20 for Windows for analysis. Descriptive data are reported using frequency and percentage distribution for categorical variables. In logistic regression, each variable was assessed for significant association with contraceptive use. P value  $\leq 0.20$  was used to select potential candidate predictors for the final model of multivariate regression. The adjusted odds ratio at 95% confidence interval (CI) was reported and statistical significance was declared when the 95% CI excludes 1.0.

**Ethical clearance:** The Institutional Review Board of Mekelle University, College of Health Sciences approved the study protocol. A support letter was granted by the Afar Regional Health Bureau to conduct the survey in the study communities. Informed oral consent was obtained from each study participant after the objectives of the study and its confidentiality were explained to them.

## Results

**Socio-demographic characteristics:** A total of 1,978 women participated in the study, with a response rate of 100%. The mean age (sd) of respondents was 26.4 ( $\pm 5.5$ ) years. Almost all of the respondents were Muslim in religion (99.9%) and Afar (98.7%) in ethnicity. Of the respondents, 1,800 (91%) of women had no formal education, while 1,690 (85.4%) of them reported that their husbands had no formal education. Majority, 1,921 (97%), were married while 392 (20.4%) of their husbands had at least one other wife (Table 1).

**Table 1: Socio-demographic characteristics of women of reproductive age from pastoralist communities of Afar region, Ethiopia, 2016 (n = 1,978)**

Variable	Category	Number (%)	
Age in years(n = 1,978)	15-19	145 (7.3)	
	20-24	543 (27.5)	
	25-29	630 (31.9)	
	30-34	461 (23.3)	
	35 and above	199 (10.1)	
Educational status(n = 1,978)	No education	1,800 (91)	
	Primary	164 (8.3)	
	Secondary and above	14 (0.7)	
Marital status(n = 1,978)	Married	1,921 (97.1)	
	Others*	57 (2.9)	
Only wife for husbands (n = 1,921)	Yes	1,529 (79.6)	
	No	392 (20.4)	
Number of other wives husband has (n = 392)	Two	325 (82.9)	
	Three	49 (12.5)	
	Four	18 (4.6)	
	Pastoralist	1,675 (87.2)	
Occupation of husband (n = 1,921)	Others	246 (12.8)	
	Domestic animals	1,944 (98.3)	
Household asset availability	Electricity	25 (1.3)	
	Radio	296 (15)	
	TV	12 (0.6)	
	Mobile phone	994 (50.3)	
	Refrigerator	6 (0.3)	
	Estimated walking time to the nearest health facility (n = 1,950)	Less than 30 minutes	734 (37.6)
		30-60 minutes	360 (18.5)
Greater than 1 hour		856 (43.9)	

\*=Either Single or widowed or separated

### Reproductive history

The mean age of respondents was 15.8 ( $\pm 1.8$ ) at first marriage, 16.9 ( $\pm 1.8$ ) at first pregnancy, and 17.7 ( $\pm 2.1$ ) at first child birth. More than eight in 10 of the women, 1,649 (83.4%), became pregnant before the age of 18 years. About 34.4% of the women had given birth five times or more, while 29.5% of the women

had five or more children. Almost all (94.3%) of the respondents in the study communities had the desire to have more children in the future. The mean ideal number of children reported was 3.9 ( $\pm 2.3$ ), and nearly one in five of the women had experienced abortion (see Table 2).

**Table 2: Reproductive history among women of reproductive age from pastoralist communities of Afar, Ethiopia, 2016 (n = 1,978)**

Variables	Category	Number	Percent (%)
Number of pregnancies (n = 1,975)	1-2	587	29.7
	3-4	609	30.8
	5 and above	782	39.5
Number of children born (n = 1,975)	1-2	652	33
	3-4	645	32.6
	5 and above	681	34.4
Current number of children (n = 1,975)	1-2	708	35.8
	3-4	686	34.7
	5 and above	584	29.5
Do you want more children in the future?	Yes	1,865	94.3
	No	81	4.1
	Not decided	32	1.6
Have you ever had an abortion?	Yes	470	23.8
	No	1,508	76.2
Number of abortions (n = 470)	1-2	422	89.8
	3 and above	48	10.2

**Contraceptive use:** The ever and current use of contraceptives was 150 (9.3%) and 107 (5.4%), respectively. The participants were asked if they have ever heard about any methods to prevent pregnancy and out of the total respondents, 1,614 (81.6%) respondents reported that they had. Injectables and pills were mentioned by 97% and 92% of the women who had heard about FP methods, respectively. Among ever

users, 29 (26.9%) of the women had discontinued any type of contraceptive. Regarding reasons for contraceptive non-use, 89.2% of the non-users reported they want to have more children, 54.2% reported husband disallow it and 50% reported their religion do not support it. In addition, 24% of the non-users reported fear of side effects (see Table 3).

Table 3: Contraceptive use among women of reproductive age from the pastoralist communities of Afar, Ethiopia, 2016 (n = 1,978)

Variables		Number (%)
Ever heard about contraceptive methods (n = 1,978)		1,614 (81.6)
Type of contraceptive heard about (n = 1,614)	Pill	1,483 (91.9)
	IUCD	30 (1.5)
	Injectable	1,563 (96.8)
	Implant	450(22.7)
	Condom	158 (9.8)
Ever used contraceptives		150 (9.3)
Currently use contraceptives		107 (5.4)
Type of contraceptive used (n = 108)	Pill	26 (24.1)
	Injectable	81 (75)
Reasons for contraceptive non-use (n=1506)	Want to have more children	1,344 (89.2)
	Husband did not allow me to use	816 (54.2)
	My religion did not support me to use	755 (50.1)
	Fear of side effects	384 (25.6)
Ever discontinue a contraceptive (n = 107)		29 (26.9)
Reason for discontinuation (n = 29)	Fear of side effects	7 (24.1)
	Want to switch to other method	8 (27.6)
	Fear of divorce	6 (20.7)
	Want to have more children	18 (62.1)
	I did not get the preferred method	2 (6.9)
	Husband's influence	7 (48.3)
	Medical problem	2 (6.9)
	Religious influence	2 (6.9)
	Fear of infertility	5 (17.2)

**Factors associated with FP use:** Table 4 depicts that factors associated with contraceptive use in the multivariable logistic regression. women who able to read and write were 2.5 times more likely to currently use FP than women who do not able to read and

write (AOR=2.5; 95%CI: 1.5 - 4.1). Similarly, the likelihood of current contraceptive use for women who were the only wife for their husband was 1.65 times more likely than those in polygamous marriage (AOR=1.65; 95%CI:1.1-2.6) (see Table 4).

Table 4: Factors associated with contraceptive use among women of reproductive age from the pastoralist communities of Afar, Ethiopia, 2016 (n = 1978).

Variables	Categories	Current FP use		AOR(95% C.I)
		Yes(107)	No(1871)	
<b>Able to read and write</b>	No	86(80.3)	1703(91.1)	1
	Yes	21 (19.6)	168 (8.9)	2.475(1.5-4.1)
<b>Being only wife</b>	No	30(31.8)	362(22.2)	1
	Yes	73(68.2)	1456(77.8)	1.65(1.1-2.6)
Household asset availability	No	10(9.4)	24(1.2)	1
	Yes	97(90.6)	1847(98.7)	7.9(3.7-17.0)
<b>Future plan to have child</b>	No	13(12.1)	68(3.6)	8.1(3.7-18.2)
	Do not decided	9(0.48)	23(1.22)	2.0(0.7-5.4)
	Yes	85(79.4)	1780(95.1)	1

### Discussion

This study aimed to assess factors influencing contraceptive use among women of reproductive age group from pastoralist communities of Afar. Despite majority of the women ever heard about contraceptive the proportion of ever and current use for contraceptive

was found to be low. The proportion of current contraceptive users (5.4%) was lower compare to a findings revealed by a previous study in Afar region, Ethiopia (10) and elsewhere in the world (14-17). Recently, Ethiopian demographic health survey for Afar regional state also revealed a 12% proportion for

women from Afar (9). The variation may be subjected to a time variation, as the current study was conducted two years preceding the EDHS report. Moreover, only rural women were included in the current study, which definitely could justify the lower proportion in the current study.

Ability to read and write positively influenced contraceptive use for women of reproductive age group in Afar pastoralist communities. This finding was in line with the national report from Ethiopian health and Demographic survey, which shows contraceptive use among married women increases with education (9). Similarly, previous studies also reported contraceptive use decreases with low educational attainment (3, 4, 18). Cognizant to majority (68%) of women in Afar region does not attend formal education (19), giving additional opportunities for the pastoralist women, such as adult learning, may have a promising power to improve contraceptive use. Furthermore, fear of side effects was mentioned as reason for contraceptive non-use and discontinuation. It is obvious that their lower educational attainment and illiteracy may limit them access to information about the side effects.

Being the only wife also positively influenced contraceptive use among women of reproductive age group from Afar pastoralist community. In line to the current finding, previous studies also reveals polygamous marriages negatively influence contraceptive use (20- 23). This may indicate that having women in polygamous marriage may tend to have more children to dominate the other wives, which could reduce contraceptive use. As expected, women who have a plan to have children were also less likely to report current contraceptive use. In line with the finding, majority of the non-users described wanting to have more children as a reason for contraceptive non-use. This is in tandem with Ethiopian Health and Demographic Survey (EDHS) report, which shows lower demand for family planning for married women in Afar region (9). Consistently, a review of Ethiopian DHS report also shows increased ideal number of children is negatively associated with contraceptive use (24).

Owning domestic animals was also positively associated with contraceptive use. Wealth status of households in pastoral communities like Afar may account to ownership of domestic animals. Ethiopian Demographic Health Survey also shows a sharp increase in contraceptive use with wealth status, ranging 27% for women in lowest wealth quintile to 47% in higher wealth quintile (9, 24). Majority of Afar population lies under the lowest wealth quantile in Ethiopian wealth index (13). Literatures from other African countries also acknowledge that community wealth exerts pressure in contraceptive use among women of rural residence(25,26). Thus, the low wealth status may partly explain the low proportion of contraceptive use in the communities.

Substantial proportion of non-users reported husband disapproval as reasons for contraceptive non-use while others reported that their religion do not support it. Similar to the current study, previous studies also showed that religious related reasons and perceived husband disapprovals as barriers for contraceptive use for women from pastoralist communities of Ethiopia (10, 9, 27). Thus, tackling the misperception held by the women about religious thoughts in this regard and improving integrated efforts to raise involvement of men in family planning remains unfinished agendas in pastoralist communities.

#### **Limitations of the study**

The study was not without limitation. As it was cross-sectional survey and majority of the respondents were not FP users, the study may had limited strength to examine the factors influencing contraceptive use because the proportion of current users was low.

#### **Conclusions and recommendations:**

The proportion of ever and current FP users were low. Married women's educational and wealth status, polygamous marriage and decision to have children were factors influencing contraceptive use for afar pastoralist communities. Contextualized and tailored awareness creation activities that considered the low school attainment of the women might be promising to reduce the gaps related to its benefits and women's fear of the side effects. Sending girls to school and providing opportunities to address illiteracy for adult women in pastoralist communities may be promising to improve contraceptive use.

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