

## Family Planning Service Utilization and Its Associated Factors among Married Women in Benchi-Maji Zone, Southwest, Ethiopia: Community-Based Cross-sectional Study

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### Abstract

In Ethiopia, contraceptive use has doubled in the last five years, but women still bears an average of five children and 25% of married women want to space or limit their births but are not currently using contraception. So that, the purpose of this study was to assess Family planning services utilization and its associated factors among married women in Benchi-Maji Zone, Southwest, Ethiopia.

A community based cross sectional study was carried out to collect data from 801 randomly selected married women in the reproductive age group from six Kebles (lowest administrative unit). Pretested and structured questionnaire was used to collect data. The collected data was entered into a computer using Epi-Data version 3.0 then exported to SPSS for Windows version 20.0 for further analysis. Logistic regression was used to identify important predictors of family planning service utilization.

Out of 765 study participants, 82.61% were current users of at least one of Family Planning (FP) method and majority of them were using methods to space birth interval 452 (71.5%), to prevent unwanted pregnancy 198 (31.3%), followed by to promote health of born children 149 (23.6%). Knowledge about the benefits of FP and postnatal care follow up during their last delivery showed statistically significant associations with FP service utilization. Mothers who have mentioned at least one benefit of FP were about seventy times (AOR 71 95 % CI 25-202) more likely to ever use either of the FP methods and who have PNC follow up during their last delivery were about four times more likely (AOR 3.795 % CI 1.6-9.0) to use either of the FP methods in comparison with those mothers who haven't attended for Postnatal care at all.

Most of the study participants prefer to use short-term family planning methods. It is important to promote long-term family planning methods to get a desire outcome among married women. Women are more receptive of FP during post-natal visits. It is desirable to utilize that visit for promotion of long-term FP methods among married women.

**Keywords:** Family planning; Benchi-Maji; Southwest; Cross-sectional study; Mizan-Tepi University

### Introduction

Pregnancy and childbirth are generally times of joy for parents and families. However, too early, too close, too many, or too late pregnancies pose adverse health consequences for the mother, child, and family [1-3]. A woman in a developing country is ninety seven times more likely to die as a result of pregnancy than a woman in a developed country [4]. The developing regions shares approximately 99% of the estimated global maternal deaths in 2015 and out of this, 66% were from sub-Saharan Africa [5]. In Ethiopia, the levels of maternal and infant mortality are among the highest in the world. In 2005, 676 maternal deaths have accounted for every 100,000 live births [6]. The probability of an adult woman dying from a maternal cause during her reproductive lifespan is about one in forty in Ethiopia [3].

Family planning is a low-cost yet effective way to lower maternal mortality by reducing the number of high-risk births [3]. The global report noted that unwanted, mistimed and unintended pregnancy is

the most common cause of maternal mortality in developing countries and then, it could have been prevented by using family planning methods [7,8]. Using family planning could prevent as many as one in every three maternal deaths by allowing women to delay motherhood, space birth, avoid unintended pregnancies and abortion and stop childbearing when they reached their desired family size [3,9,10].

According to Demographic and Health Survey of Ethiopia (EDHS-2005), the knowledge of contraception has remained consistently high over the past five years with 88% of currently married women having heard of at least one method of contraception. However, actual contraceptive practice among women of reproductive age group remained very low [11]. Among currently married women, the trends in contraceptive use over the last fifteen years (2000 to 2014) have shown significant progress. There is a five-fold increase in the use of a method of contraception by currently married women, from 8% in 2000 to 42% in 2014. Also the contraceptive prevalence among currently married women increased by an impressive 46% in the last three years, from 29% in 2011 to 42% in 2014. Much of this increase is attributable to the sharp increase in the use of injectables. Use of

injectables increased from 3% in 2000 to 31% in 2014. Equally impressive is the 49% increase in the use of injectables in just the last three years [12].

However, married women still bears an average of five children and 25% of them want to space or limit their births but are not currently using contraception even though increased family planning use could save approximately 13,000 mothers and more than 1 million children [13]. Despite the fact that family planning is critical for better improvement of maternal and child health; little is known about the use and factors influencing the use of this services in peripheral area in the region in general and particularly in Benchi-Maji zone. Therefore; the aim of this study was to assess Family planning service utilization and associated factors among married women in Benchi-Maji zone, southwest Ethiopia.

## Methods and Materials

### Study area and period

The study was conducted in Bench-Maji Zone, Southern region, Ethiopia. It is located in the southwest of Ethiopia with a population of about 760,313 (380,841 male and 379,472 Female) and 86% of population lives in rural areas. The majority of the inhabitants belong to Bench ethnic group, with small proportions of other ethnic origins [14,15]. The Zone has 218 health facilities (182 health posts, 35 Health centers, one General hospital and uncounted private clinics.) with one university and one health science college (Zonal Health Department Report). Most of the health institutions provide modern family planning services. The study was carried out from June 15, 2015 to August 15, 2015 [16].

### Study design

The study employed cross-sectional study design where the data were collected at a specific point in time.

### The source and study population

The study population is defined as all married women in their reproductive age group. The samples were randomly chosen from married women aged 15 to 49 years who was pregnant at least once in the last 2 years preceding study survey; irrespective of the pregnancy outcome.

### Sample size determination

A sample size of 801 was determined from three randomly selected Districts in the zone by using a formula for estimation of single population proportion with the assumption of 95% confidence level, margin of error of 5% and taking proportion of Family planning 61.6% to obtain maximum sample size (19) and design effect of 2. In addition, non-response rate of 10% of the determined sample was added up on the calculated sample size and then, the total sample size of 801 was enriched.

### Sampling procedure

Administratively, there are ten woredas (districts) in the Benchi-Maji zone with one administration town (Mizan-Aman Town). In order to have a fairly representative sample, selections of two Kebles (lowest administrative unit) were carried by using lottery method from

each randomly selected three woredas namely Mizan-Aman Town, Shey-Bench and Menit-Shasha. Then, recording the number of households in six selected Kebles were carried. After that, calculated sample size was obtained by using probability proportional to the size of house hold in the six selected Kebles. From the six sampled Kebles, a total of 801 study samples were selected by using systematic sampling procedure. Lottery method was used for households with more than one eligible woman. In case, there were households with no eligible woman, the immediate next household was interviewed. Revisits of two times were made in case where eligible respondents were not available at the time of the survey. Regarding a women who have had more than one child, the most recent birth was taken.

### Study variables

**Dependent variables:** Family Planning practice of married women.

**Independent variables:** Socio-demographic factors (age of mother, religion, ethnicity, occupation, education, Household economy), Obstetric History (Parity, gravidity, birth interval, mothers child experience, Pervious utilization of service) and Other factors related Access to mass media, health facility).

### Data Collection Techniques and Procedures

Interviewer administered questionnaire was employed to collect the data. The questionnaires adopted and modified from EDHS and after reviewing different relevant literature. The questionnaire comprised of socio demographic characteristics (Age, ethnicity, education, Marital status, occupations etc.); reproductive history; knowledge and practice of family planning among married. The English version of the questionnaire was translated into Amharic languages for better understanding by the data collectors. The questionnaire then retranslated back to English to check for its consistency. Six diploma nurses who are fluently speaking local language were trained as interviewers and three BSc nurses were recruited for supervision of data collection. The interpretations of the questionnaires were checked by two people who are fluent in both languages. The training of diploma-nurse interviewers and BSc-nurse supervisors was carried within two days. The training was focused on explanation of the study purpose, interviewing techniques, data handling techniques, and ethical considerations during data collection. The interviewers and supervisors have had data collection guidelines. The supervisors were monitored data collection process by physical presence and through phone communication.

### Data quality control

The pretest of the questionnaire was carried out in one of the kebles in BM (Benchi-Maji) Zone outside of the selected kebles that has similar socio-demographics characteristics with the people in both towns. 5% of total sample were used for pretesting and not included in original work. Based on the finding of pre-test, data collectors were reoriented and the questionnaire was modified as necessary. Data were collected by the trained six diploma Nurses from the selected Kebles of BM zone.

During data collection, socio demographic factors, obstetric history, health service barrier, and other factors related to FP utilization were assessed among study subjects. On the days of data collection, the principal investigator and supervisor was monitored the data collection process by checking its completeness of the data. Data was checked again for its completeness before data entry and the cleaning

process was done by running simple frequency after data entry for its consistency.

**Data processing and analysis**

Each completed questionnaire was coded on pre-arranged coding sheet by the principal investigator to minimize errors. Data was entered into a computer using Epi-data version 3.0, 10% of the responses was randomly selected and checked for consistency of the data entry. Then printed frequencies were used to check for outlier and clean data. The data were cleaned accordingly and then, exported to SPSS Windows version 20.0 for further analysis. A computer frequency, % age, chi -square with p-value was used to describe the study population in relation to relevant variables. Analysis of data was done using two step logistic regression (bivariate and multivariate) to see the effect of the independent variables on the dependent variable by controlling confounders. Creating model for each outcome variables was carried. This statistical method was preferred because the dependent (outcome) variable is dichotomous, that is Family planning utilization and the independent variables are metric or categorical. Statistical significance was evaluated at 95% levels of significance. Tables and bar graphs were used to present data.

**Ethical consideration**

The study obtained ethical approval from the Research and community development support directorate of Mizan Tepi University (MTU). Support letter was written by MTU to the selected 2 woredas and 1 city administration and official permission was finally obtained from Bench Maji Zone Health Bureau, Menit Goldia woreda, Menit Shasha Woreda and Mizan Aman City administration health offices. Informed verbal consent was requested from each study participant after informing them about the objectives of the study where assurance of confidentiality was given and respondents were requested to give consent verbally after explaining objectives of the study.

**Results**

**Socio demographic characteristics of married women in Benchi-Maji Zane 2015**

About 801 married women were contacted and asked for consent, of whom 765 (95.51%) of them provided full information and used for subsequent analysis The mean age of mothers was 25.43 with the mean average monthly income of 1146.19 Ethiopian Birr with the average family size of 4 with ranging from 2 to 11. Majority of mothers were from Bench ethnic group 188 (24.6%) followed by Amhara 155 (20.3%) and Menit 148 (19.3%). Majority of mothers were followers of Protestantism 369 (48.2%) followed by Orthodox Christian 281 (36.7%). About 40% of them cannot read and write with majority of their husband (42.5%) attended primary school. About 73.2% of mothers were housewives with 36.3 % of their husbands were farmers. Majority of families have TV/Radio 483 (63.1%) in their house (Table 1).

Variable	Frequency	Percent
<b>Maternal age n=765</b>		
15-19	21	2.7
20-24	319	41.7

25-29	271	35.4
30-34	109	14.2
>35	45	5.9
<b>Ethnicity n=765</b>		
Bench	188	24.6
Amhara	155	20.3
Menit	148	19.3
Kaffa	140	18.3
Siltie	41	5.4
Oromo	33	4.3
Other*	60	7.8
<b>Religion n=765</b>		
Protestant	369	48.2
Orthodox	281	36.7
Islam	96	12.5
Other**	19	2.5
<b>Maternal Educational level n=765</b>		
Cannot read and write	306	40
Able to read and write	22	2.9
Primary school (1-8)	312	40.8
Secondary school (10-12)	80	10.5
College diploma and above	45	5.9
<b>Maternal occupation n=765</b>		
House wife	560	73.2
Merchant	75	9.8
Farmer	60	7.8
Government Employee	44	5.8
Other***	26	3.4
<b>Husbands Educational level n=724</b>		
Primary school (1-8)	308	42.5
Cannot read and write	165	22.8
Secondary school (10-12)	111	15.3
College diploma and above	89	12.3
Able to read and write	51	7
<b>Husbands occupation n=724</b>		
Farmer	263	36.3
Merchant	248	34.3
Government Employee	99	13.7

Daily laborer	85	11.7
Other***	29	4
<b>Availability of TV/Radio n=765</b>		
Yes	483	63.1
No	282	36.9
<b>Income n=765</b>		
Lowest	194	25.4
Middle	204	26.7
Upper	367	48
<b>Residence n=765</b>		
Urban	399	52.2
Semi urban	166	21.7
Rural	200	26.1
*Significant association **Traditional religion, Catholic, Hawariyat ***Private business, Driver, Carpenter, Student, Religious leader, daily labourer		

**Table 1:** Socio demographic characteristics of the married women on Family planning Services Utilization in Bench-Maji Zone, SNNPR, Ethiopia.

### Knowledge and practice of family planning among married women in Benchi-Maji zone, southwest Ethiopia, 2015

On questions related to knowledge, almost all (96.3%) of mothers replied that they ever heard about family planning services mainly from health institution by health professionals, (73.0%). Majority (72.3%) mentioned it improves maternal health as a benefit of family planning. Besides, Injectable (99.2%) and Pills (97.2%) were mentioned by majority of study participants as family planning methods.

The respondents were asked whether they ever discussed about family planning methods with their husband and health professionals or not. About three fourth (76.0%) of them replied they have discussed with their husband and only 20 (2.6%) of them replied they haven't ever discussed (Table 2).

<b>Ever heard of family planning service n=765</b>		
	Frequency	Percent
Yes	737	96.3
No	28	3.7
<b>Source of information about FP methods n=737</b>		
Health institution/ care provider	538	73
Family/Relatives	117	15.9
Radio/TV	60	8.1
Other*	22	3
<b>Type of FP they know n=737</b>		

Injectables	731	99.2
Pill	716	97.2
Implants/Norplant	575	78
IUDs	421	57.1
Condom	281	38.1
Female sterilization	162	22
Male sterilization	90	12.2
Spermicidal	18	2.4
<b>Benefits of FP n=737</b>		
Improve maternal health	533	72.3
Improve child health	487	66.1
Increase wealth of the family	236	32
Increase wealth and prospective of the community	47	6.4
Increase national economic growth	40	5.4
Others	16	2.01
*From school (education) and more than one source		

**Table 2:** Knowledge about and practice of family planning service among married Women of Bench-Maji Zone, Southwest Ethiopia, 2015.

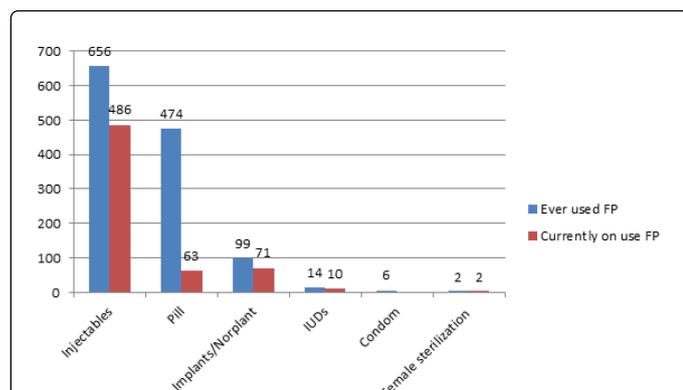
Women were also asked whether they ever used any of modern family planning methods or not. About 92.42% of them ever used modern family planning methods and 92.79% of them used injectable and none of them used spermicidal and male sterilization. 82.61% of study participants were using either of family planning methods during the time of data collection mainly of injectable (76.9%) and 2 mothers were permanently sterile, none of them used condom, spermicidal and male sterilization as a method to plan pregnancy (Figure 1).

Reason of using FP were also asked among current users and 71.5% of them used to space birth interval, 31.3% of them mentioned that to prevent unwanted pregnancy, 23.6% of them used because they wanted to promote the health of already born children, 5.5% of them used because of having enough children, 1.6% of them used because they can't be pregnant again due to disease condition, and 5.7% of them used shortage of income to have more children.

Those who were not currently using FP were also asked again about reason and 17.3% of them said due to fear of side effects, 13.3% of them said due to plan to have more children, 4.0% of them said rumours they are not good, 2.7% of them due to husbands disapproval, 1.3% of them said lack of awareness, 1.3% of them due to the influence of important others, 1 (1.3%) of them due to religious prohibition, 1.3% of them said fear of infertility and menstruation did not returned, breast feeding, too early to start were among the mentioned reasons not to use.

The future intention of using family planning methods was asked and 80 % of them have a plan to use and 65.5% of them have intention to use injectable, 21.4% of them have intention to use implants, 9.5% of

them have intention to use pill, 3.6% of them have intention to use IUDs in the future.



**Figure 1:** Current and previous use of family planning methods among married Women of Bench-Maji Zone, Southwest Ethiopia, 2015.

### The association between independent variables and Family planning service utilization among married women in Bench-Maji zone, southwest Ethiopia, 2015

Bivariate analysis of the selected factors which includes maternal age, religion, maternal educational level, maternal occupation, maternal marital status, availability of TV/Radio, income quartiles, residence, knowledge of the benefits of FP, PNC follow up during their last delivery and maternal age during first pregnancy was performed [17,18]. Among the factors only maternal age during first pregnancy has not shown statistically significant association with FP utilization.

After adjustment with multivariate analysis only knowledge of the benefits of FP and PNC follow up during their last delivery maintained statistically significant associations FP service utilization. Among the factors which were associated with FP service utilization knowledge of the benefits of FP had shown extremely strongest associations with FP service utilization in which those mothers who have mentioned at least one benefit of FP were about seventy times (AOR 71 95% CI 25-202) more likely to ever use either of the FP methods and who have PNC follow up during their last delivery were about four times more likely (AOR 3.795% CI 1.6-9.0) to use either of the FP methods in comparison with whom mothers who haven't attended for PNC at all (Table 3).

### Discussion

The aim of this study was to identify determinants of family planning service utilization in Bench-Maji Zone, Southwest Ethiopia. Many reasons were mentioned among users for low utilization of FP methods in Ethiopia [19]. Therefore, understanding the various factors contributing to low family planning utilization is vital. In our study, majority, 737 (96.3%) of respondents have ever heard about family planning services and two third of them get information about the

methods from health facility. This result is similar with other studies conducted in Mekele, Adigrat and Debre Markos town [20-22]. In this study, 707 (92.42%) of respondents ever used either of the modern FP methods. This finding is consistent with several studies [18-20].

On contrary, this result is higher than population based study conducted in Mojo Town [16]. Possible reason for this discrepancy might be difference in study population. This study also focused on married women rather reproductive age group women. In our finding, majority of them ever used injectable 656 (92.79%) and none of them used spermicidal and male sterilization and 82.61% of them were using either of FP methods during the time of data collection; mainly of injectable 76.9% and 2 mothers were permanently sterile, none of them were using condom, spermicidal and male sterilization as method to prevent pregnancy. The finding of this study coincide with study conducted in Mekele city and Assosa district among married women; majority of them ever used and have been using injectables and pills [19-21] and this was too much higher than a population based study in Mojo town which reported that from 551 respondents nearly 34% of them have ever practiced one form of FP methods during their life [16] and the study from South Central Ethiopia in which Current contraceptive prevalence rate was 25.4% (95% CI: 24.2, 26.5) [17] and this difference mainly might be attributed to expansion of health facility, increased Information, Education and communication (IEC) on FP methods which creates awareness and increased service seeking behavior in this study. Unlike the above disparities; the finding of this study yields closer result to a study conducted in the Dangila and Assosa zone [18,19]. In our study, majority 452 (71.5%) of them used FP to space the birth interval and 198 (31.3%) of them mentioned that to prevent unwanted pregnancy. This was in line with study conducted in Assosa district [19]. Fear of side effect and wanting more children were major reason for not using FP methods in this study. This is consistent with other studies [16,20].

According to this study among the factors which were associated with FP service utilization, knowledge of the benefits of FP had shown extremely strongest associations with FP service utilization in which those mothers who have mentioned at least one benefit of FP were about seventy times (AOR 7195% CI 25-202) more likely to ever use either of the FP methods and who have PNC follow up during their last delivery were about four times more likely (AOR 3.795% CI 1.6-9.0) to use either of the FP methods in comparison with mothers who haven't attended for PNC at all. This result is similar with a study done in Mojo town in which age of the mother, age at first marriage, marital status, income, occupation of women and occupation of husbands were not independently associated with FP utilization [16].

Factors which were not associated with FP service utilization were shown to have an association as a South Central Ethiopia study in which the odds of current use of family planning was 2.3 (95% CI: 1.66, 3.18) times higher among urbanites compared to highlanders and there was a positive association between contraception and educational status of women. Women with primary and secondary level of education were about 1.32 (95% CI: 1.12, 1.56) and 1.99 (95% CI: 1.38, 2.88) times respectively more likely to use FP compared to their uneducated counterparts [17].

Variables	Ever used FP				COR (95%CI)	P-value	AOR (95%CI)	P-value
	No	No (%)	Yes	Yes (%)				

<b>Maternal Age</b>								
15-24	23	6.8	317	93.2	1		1	
25-34	26	6.8	354	93.2	1.0 (0.6, 1.8)	0.967	1.8 (0.8, 4.2)	0.161
35-44	9	20	36	80	0.3 (0.1, 0.7)	0.004*	1.1 (0.3, 4.2)	0.866
<b>Religion</b>								
Protestant	39	10.6	330	89.4	1			
Orthodox	14	5	267	95	2.3 (1.2, 4.2)	0.012*	1.3 (0.5, 3.4)	0.53
Islam	2	2.1	94	97.9	5.6 (1.3, 23.4)	0.020*	3.5 (0.5, 24.7)	0.202
Other**	3	15.8	16	84.2	0.6 (0.2, 2.3)	0.479	0.3 (0.04, 2.6)	0.299
<b>Maternal Educational level</b>								
Can't read	41	13.4	265	86.6	1			
≤ Primary	15	4.5	319	95.5	3.3 (1.8, 6.1)	0.000*	2.1 (0.8, 5.5)	0.141
≥ Secondary	2	1.6	123	98.4	9.5 (2.3, 40.0)	0.002*	5.8 (0.8, 40.1)	0.076
<b>Maternal occupation</b>								
House wife	40	7.1	520	92.9				
Gov't	2	4.5	42	95.5	1.6 (0.4, 6.9)	0.518	1.4 (0.2, 13.3)	0.764
Merchant	2	2.7	73	97.3	2.8 (0.7, 11.9)	0.16	0.6 (0.1, 2.9)	0.511
Farmer	8	13.3	52	86.7	0.5 (0.2, 1.1)	0.094	1.1 (0.4, 3.5)	0.874
Other**	6	23.1	20	76.9	0.3 (0.1, 0.7)	0.006*	0.3 (0.1, 1.7)	0.179
<b>Availability of TV/Radio</b>								
No	36	12.8	246	87.2	1		1	
Yes	22	4.6	461	95.4	3.1 (1.8, 5.3)	0.651		
<b>Income quartile</b>								
Lowest	26	13.4	168	86.6	1		1	
Middle	22	10.8	182	89.2	1.3 (0.7, 2.4)	0.424	1.0 (0.4, 2.3)	0.925
Upper	10	2.7	357	97.3	5.5 (2.6, 11.7)	0.000*	2.1 (0.6, 7.7)	0.254
<b>Residence</b>								
Urban	17	4.3	382	95.7	1		1	
Semi urban	22	13.3	144	86.7	0.3 (0.2, 0.6)	0.000*	0.4 (0.1, 1.3)	0.12
Rural	19	9.5	181	90.5	0.4 (0.2, 0.8)	0.013*	1.5 (0.4, 5.4)	0.531
<b>Maternal age during first pregnancy</b>								
15-19	31	9.3	303	90.7	1			
20-24	22	5.9	354	94.1	1.7 (0.9, 2.9)	0.085		
25-34	5	9.1	50	90.9	1.0 (0.4, 2.8)	0.964		
<b>Mentioned benefit of FP</b>								
No	28	58.3	20	41.7	1			

Yes	30	4.2	687	95.8	32 (16, 63)	0.000*	71 (25, 202)	0.000*
<b>PNC follow up</b>								
No	48	12.9	325	87.1	1			
Yes	10	2.6	382	97.4	5.6 (2.8, 11.3)	0.000*	3.7 (1.6, 9.0)	0.003*

**Table 3:** The association between independent variables and FP service utilization among married Women of Bench-Maji Zone, southwest Ethiopia, 2015.

## Conclusion

In this study, majority of mothers 737 (96.3%) replied that they have ever heard about family planning services. Injectable and Pills methods were used by majority of study participants. Out of Current 632 users, majority 452 (71.5%) were using the methods to space the birth interval followed by 198 (31.3%) to prevent unwanted pregnancy. Out of observant who have a plan to use FP methods in future, majority of observant have intention to use injectable. Postnatal care service utilization during their last delivery and awareness about FP methods has showed statistically significant associations with Family planning service utilization. Most of the study participants prefer to use short-term family planning methods. It is important to promote long-term family planning methods to get a desire outcome among married women. Women are more receptive of FP during postnatal visits. It is desirable to utilize that visit for promotion of long-term FP methods among married women.

## Limitations of the study

The drawback of this study was the cross-sectional nature of the data that could obscure the causal effect relationships of different factors. In addition, selection and recall bias were another probable limitation of this study.

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## Competing interests

The authors declare that they have no competing interests.

## Authors' contributions

Tafesse Lamaro (TL) was conceived the study, conducted data collection, participated in analysis and writing of the manuscript.

Niguse Tadele (NT) was participated in data collection, analysis and writing of manuscript. All authors read and approved the final manuscript.

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