



GLOBAL JOURNAL OF MEDICAL RESEARCH  
INTERDISCIPLINARY

Volume 13 Issue 4 Version 1.0 Year 2013

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals Inc. (USA)

Online ISSN: 2249-4618 & Print ISSN : 0975-5888

# Prevalence and Associated Factors of Unmet need for Family Planning among Married Women in Enemay District, Northwest Ethiopia: A Comparative Cross-Sectional Study

By Getiye Dejenu, Mekonnen Ayichiluhm & Amanuel Alemu Abajobir

*Debremarkos University, Ethiopia*

**Abstract - Introduction :** Millions of women want to delay or avoid pregnancy but are not using contraception. Ethiopia has the highest levels of unmet need for family planning among African countries. The 2011 Ethiopia Demographic and Health survey found that 25.3 percent of women had unmet need for family planning, 16.3 % for spacing and 9 % for limiting. Thus, this study was designed to assess the prevalence and associated factors of unmet need for family planning in Enemay district, Northwest Ethiopia.

**Methods :** Community based comparative crosssectional study design was employed using multi-stage sampling technique. Data were collected through interviewing married reproductive age women using semi-structured questionnaire. Data were entered and analyzed using Epi data version 3.1 and SPSS version 16 statistical software respectively.

**Keywords :** *family planning, unmet need, married women, Ethiopia.*

**GJMR-K Classification :** *NLMC Code: WA 550*



PREVALENCE AND ASSOCIATED FACTORS OF UNMET NEED FOR FAMILY PLANNING AMONG MARRIED WOMEN IN ENEMAY DISTRICT, NORTHWEST ETHIOPIA A COMPARATIVE CROSS-SECTIONAL STUDY

*Strictly as per the compliance and regulations of:*



RESEARCH | DIVERSITY | ETHICS

© 2013. Getiye Dejenu, Mekonnen Ayichiluhm & Amanuel Alemu Abajobir. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License (<http://creativecommons.org/licenses/by-nc/3.0/>), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

# Prevalence and Associated Factors of Unmet need for Family Planning among Married Women in Enemay District, Northwest Ethiopia: A Comparative Cross-Sectional Study

Getiye Dejenu<sup>α</sup>, Mekonnen Ayichiluhm<sup>σ</sup> & Amanuel Alemu Abajobir<sup>ρ</sup>

**Abstract - Introduction :** Millions of women want to delay or avoid pregnancy but are not using contraception. Ethiopia has the highest levels of unmet need for family planning among African countries. The 2011 Ethiopia Demographic and Health survey found that 25.3 percent of women had unmet need for family planning, 16.3 % for spacing and 9 % for limiting. Thus, this study was designed to assess the prevalence and associated factors of unmet need for family planning in Enemay district, Northwest Ethiopia.

**Methods :** Community based comparative cross-sectional study design was employed using multi-stage sampling technique. Data were collected through interviewing married reproductive age women using semi-structured questionnaire. Data were entered and analyzed using Epi data version 3.1 and SPSS version 16 statistical software respectively.

**Results :** The overall unmet need for family planning was 193 (25.6%) of which 119 (15.8%) was for spacing and 74 (9.8%) for limiting. It was 69 (18.4%) and 124 (32.7%) in urban and rural areas of the district respectively. Age at first marriage, educational status of the women and their partners, partner attitude towards family planning services utilization, current menstrual status, healthcare providers visit and discussion about family planning issues were the main predicting factors of unmet need for family planning.

**Conclusion :** The overall prevalence of unmet need in the district was high. Empowering women through education and healthcare providers visit should be strengthened.

**Keywords :** family planning, unmet need, married women, Ethiopia.

## 1. INTRODUCTION

Family planning (FP) began to be viewed as a way of making changes in women's lives, securing women's empowerment and ensuring their well being (Cleland J, 2006).

Unmet need for FP is the number or percent of women currently married (in union) who are fecund and who desire to either terminate (do not want anymore) or postpone (at least 2 years) childbearing, but who are not

currently using a contraceptive method (John A, et al., 2002).

Around the world, about 222 million women have an unmet need for FP and 645 million women have their needs met through the use of a modern contraceptive method such as intra-uterine device (IUD), pills, injectables or sterilization [9]. Every minute, nine children under age 5 die in Africa which resulted in death of 4.8 million children annually. Family planning could prevent many of these deaths by enabling women to bear children during the healthiest times for themselves and their children (David O, 2008).

Evidence on the benefits of FP for maternal and child health, poverty reduction strategies and women's empowerment is quite clear. In Sub-Saharan Africa for example, it is estimated that provision of FP services reduces unintended pregnancies by 77% (i.e. from 17 million to 4 million annually); reduces unsafe abortions from 5.2 million to 1.2 million; and reduces the number of women in need of medical care from unsafe abortion from 2.2 million to 500,000. It is therefore clear that FP is a valuable economic investment. Reducing unmet need would significantly reduce unintended pregnancies, abortions, and maternal and child deaths. A current projection for Ethiopia estimates 56 million pregnancies from 2005 to 2015, of which nearly 24 million would be unintended. By meeting unmet need in Ethiopia, there would be almost 6 million fewer unintended pregnancies, which would lead to nearly 2 million fewer abortions. Moreover, more than 1 million infant and child deaths (under age 5) would be averted and nearly 13,000 maternal deaths would be averted over the 10-year period (Family Planning Conference, 2009).

Ethiopia has among the highest levels of unmet need for contraception in Africa. The 2011 Ethiopia Demographic and Health survey (EDHS) found that 25.3 % of women had unmet need for FP, 16.3 % for spacing and 9 % for limiting. Unmet need for both spacing and limiting is higher among rural residents than their urban counter parts. The general unmet need for FP among urban and rural dwellers is 15% and 27.5% respectively (ICF International, 2012).

Author <sup>α</sup> : Health Sciences College, Debremarkos University, Debremarkos, Ethiopia.

Author <sup>σ</sup> : GAMBY College of Medical Sciences, Bahirdar, Ethiopia.

Author <sup>ρ</sup> : Department of Public Health, Debremarkos University, Debremarkos, Ethiopia. E-mail : abajobir64@yahoo.com

A proper understanding of the extent of unmet need for FP among currently married women of reproductive age and associated factors are of paramount importance in tackling the problem of unmet need for FP, which paves the way for the improvement of the prevailing socioeconomic problems of the country. Particularly, it would have a substantial contribution in the improvement of the health status of women and children.

Unmet needs for contraception have a tendency to be influenced unequally among different settings mainly due to the effect of socio-economic and demographic variables.

The availability of accurate information and high quality FP services enable people to make informed choices. In Ethiopia, however, it is clear that factors affecting FP use are area-specific and require different approaches. Hence, this study examined the factors in different settings (urban and rural); the findings would help as an input for policy makers and health planners in the area to respond to the fertility preferences of the population while simultaneously improving maternal

health, slowing the rate of population growth, and contributing to achievement of national goals. Therefore, this study tried to determine the prevalence and identify the key socio-demographic determinants of unmet need for FP in the district.

## II. METHODS

### a) Study area and period

The study was conducted in Enemay district, northwest Ethiopia, from 20<sup>th</sup> March to 10<sup>th</sup> April 2013.

### b) Study Design

A community-based comparative cross-sectional study was carried out to determine the prevalence and identify the key socio-demographic determinants of unmet need for FP services.

### c) Study Population

The source population constituted all married women in the reproductive age and married women in the selected *kebeles* were the study population.

### d) Sample size determination

*Table 1* : Assumptions for sample size calculation, Enemay district, Northwest Ethiopia, 2013

Character	Value
Significance Level (alpha)	5% two sided
Power (% chance of detecting)	80%
Proportion of unmet need for family planning for urban	27.5%
Proportion of unmet need for family planning for rural	15%
Relative Sample Sizes Required (Rural / Urban )	1.0
Design effect	2
Non-response rate	5%

The sample size was determined based on double population proportion according to the assumptions in the above table (Table 1).

The proportion of unmet need for FP among currently married women 15% and 27.5% for urban and rural respectively was taken from EDHS 2011 (ICF International, 2012).

The sample size was calculated using Epi Info sample size calculator for cross-sectional study. With consideration of design effect of 2 and non-response rate of 5%, the total sample size was 770.

### e) Sampling method and procedures

Multi-stage sampling followed by systematic random sampling method was employed; five out of the 25 rural *kebeles* and three urban *kebeles* were selected to represent the rural and urban residents by using lottery method respectively. The peri-urban *kebeles* of the district were excluded from the study to avoid mixing of urban and rural populations. The sample size for

both rural and urban areas was allocated proportionally; systematic random sampling technique was used to reach the study units (households). Women of reproductive age who were living with their husband were included in the study.

### f) Variables of the Study

Dependent variable:

- Unmet need for family planning services

Independent variables:

- Demographic and socio-economic characteristics
- Health facility related characteristics
- Client characteristics

### g) Data collection procedures

Data were collected using semi-structured questionnaires adapted by reviewing literatures and suited to the local situation [31, 36, 39]. The questionnaire was prepared first in English and was

translated to Amharic (local) version and the local version was used to collect the data.

The data were collected by 12 trained diploma nurses and was supervised by 3 BSc nurses. During data collection, if there were more than one eligible woman in households, one woman was selected randomly; where there was no an eligible woman in the sampled households, the next household was visited and in case it was closed revisit were done.

*h) Data quality control*

In order to maintain quality of data, data collectors and supervisors were trained and questionnaire guide was prepared. Pre-test was done on 5% of the total sample and based on the findings of the pre test the questions were modified. The collected data were checked for completeness and consistency by the principal investigator and supervisors and were communicated to data collectors. Moreover, double data entry was performed to 10% of the data to check for consistency.

*i) Data processing and analysis*

The collected data were cleaned and fed to Epi Data version 3.1 and analysis was done by using SPSS

version 16 statistical software. Variables with p-value of less than 0.2 in bivariate analyses were entered for multivariable logistic regressions to analyze the associated factors for unmet need for family planning. Standard deviations, odds ratios and 95% confidence intervals with p-value less than 0.05 as statistical significant were used for data presentation.

*j) Definitions*

**Unmet need for FP** : The number or percent of women currently married (in union) who are fecund and who desire to either terminate (do not want anymore) or postpone (at least 2 years) childbearing, but who are not currently using a contraceptive method [8].

**Kebele** : The lowest government administrative hierarchy.

*k) Ethical Considerations*

Ethical clearance was obtained from the ethical committee of Debremarkos University. The study participants were informed about the objective, rationale and expected outcomes of the study and oral consent was obtained either to participate or refuse for the interview.

III. RESULTS

*a) Demographic and socio-economic characteristics of the study subjects*

*Table 2* : Socio-demographic and socio-economic characteristics of married women by place of residence in Enemay district, Northwest Ethiopia, 2013

Characteristics	Urban		Rural		Total	
	N	%	N	%	N	%
<b>Age</b>						
15-19	9	2.4	31	8.2	40	5.3
20-24	60	16.0	52	13.7	112	14.8
25-29	84	22.3	76	20.1	160	21.2
30-34	108	28.7	98	25.9	206	27.3
35-39	75	19.9	55	14.5	130	17.2
>=40	40	10.6	67	17.7	107	14.2
<b>Religion</b>						
Orthodox	315	83.8	367	96.8	694	91.9
Muslim	51	13.6	7	1.8	51	6.8
Protestant	10	2.7	5	1.3	10	1.3
<b>Educational status of respondent</b>						
No formal education	231	61.4	312	82.3	543	71.9
Primary education	66	17.6	52	13.7	118	15.6
Secondary and above	79	21.0	15	4.0	94	12.5
<b>Educational status of husband</b>						
No formal education	145	38.6	270	71.2	415	55.0
primary education	105	27.9	77	20.3	182	24.1
Secondary and above	119	31.6	30	7.9	149	19.7
Don't know	7	1.9	2	.5	9	1.2
<b>Occupational status of respondents</b>						
House wife/farmer	330	87.8	371	97.9	701	92.85
governmental and nongovernmental employee	46	12.2	8	2.1	54	7.15

<b>Monthly income</b>						
<600	58	15.4	76	20.1	134	17.7
600-1044	94	25.0	149	39.3	243	32.2
1045-1599	99	26.3	85	22.4	184	24.4
>=1600	125	33.2	69	18.2	194	25.7
<b>Age at first marriage</b>						
<18	263	69.9	318	83.9	581	77.0
>=18	113	30.1	61	16.1	174	23.0
<b>Desired number of children (n = 755)</b>						
<5	297	79.0	288	76.0	585	77.5
>=5	79	21.0	91	24.0	170	22.5
<b>Number of total alive children (n= 666)</b>						
<5	274	81.3	242	73.6	516	77.5
>=5	63	18.7	87	26.4	150	22.5
<b>Have experienced in child death (n = 666)</b>						
Yes	57	16.9	59	17.9	116	17.4
No	280	83.1	270	82.1	550	82.6
<b>Media exposure</b>						
Yes	228	60.6	153	40.4	381	50.5
No	148	39.4	226	59.6	374	49.5

A total of 755 (98.1%) married women had responded for the interviews. Three hundred seventy six (49.8%) were from urban and 379 (50.2%) were from rural areas of the district.

The mean ages were 30.6 (SD ± 6.56) and 30.7 (SD ± 7.75) for urban and rural respondents

respectively. The mean ages of the respondents at first marriage and first pregnancy were 16.58 (SD± 2.68) and 18.71 (SD± 3.19) respectively. Based on quartile classification, 134 (17.7 %) of households had monthly income of less than 600 ETB and 243 (32.25%) between 600- 1044 ETB monthly income (Table 2).

*b) Client-related characteristics of study subjects*

*Table 3 :* Frequency distribution of client-related characteristics in Enemay district, Northwest Ethiopia, 2013

Characteristics	Urban		Rural		Total	
	N	%	N	%	N	%
Have you ever been pregnant						
Yes	344	91.5	337	88.9	681	90.2
No	32	8.5	42	11.1	74	9.8
Have you ever given birth to a child (n=681)						
Yes	337	98.0	329	97.6	666	97.8
No	7	2.0	8	2.4	15	2.2
Are you currently menstruating						
Yes	226	60.1	211	55.7	437	57.9
No	150	39.9	168	44.3	318	42.1
Have you ever heard about FP						
Yes	375	99.7	374	98.7	745	98.7
No	1	0.3	5	1.3	10	1.3
Knowledge of FP methods						
Yes	358	95.2	361	95.3	719	95.2
No	18	4.8	18	4.7	36	4.8

Most, 344 (91.5%), of the urban and 337 (88.9%) of the rural study subjects had pregnancy history and of which 666 (97.8%) had given birth. Regarding family planning information, 375 (99.7%) of urban and 374 (98.7%) of rural respondents heard about

FP methods and 358 (95.2%) of urban and 361 (95.3%) of rural respondents knew at least one FP method respectively (Table 3).

c) Facility related characteristics of study subjects

Table 4 : Frequency distribution of facility related characteristics of married women in Enemay district, Northwest Ethiopia, 2013

Characteristics	Urban		Rural		Total	
	N	%	N	%	N	%
Place to access FP services (n=520)						
Hospital	1	0.4	2	0.8	3	0.6
Health center	188	71.2	138	53.9	326	62.7
Health post	64	24.2	107	41.8	171	32.9
Private clinic	5	1.9	3	1.2	8	1.5
Drugstore	6	2.3	6	2.3	12	2.3
Time taken for round trip from the source of FP services (n=752)						
< 60 minutes	325	86.4	292	77.0	617	82.0
>= 60 minutes	51	13.6	87	23.0	135	18.0
Ever told FP methods						
Yes	231	61.4	245	64.6	476	63.0
No	145	38.6	134	35.4	279	37.0
Visited by a community based health agents in the last 12 months						
Yes	211	56.1	226	59.6	437	57.9
No	165	43.9	153	40.4	318	42.1

Majority 326 (62.7%) of the study subject got FP services from health centers followed by health posts 171 (32.9%). On the other hand, majority 617 (82.0%) of the respondents took less than an hour for round trip to get FP services. About 476 (63.0 %) of respondents ever discussed about FP services with healthcare providers and 437 (57.9%) visited by healthcare providers within the last 12 months prior to this study (Table 4).

d) Sources of information about FP methods

Two hundred fifty four (33.5%) of urban and 307 (63.7%) of rural married women got information about FP methods form health extension workers. No one of the rural respondents got information from television while 119 (15.7%) of the urban respondents got the information from television.

e) Reasons for not-use of FP methods

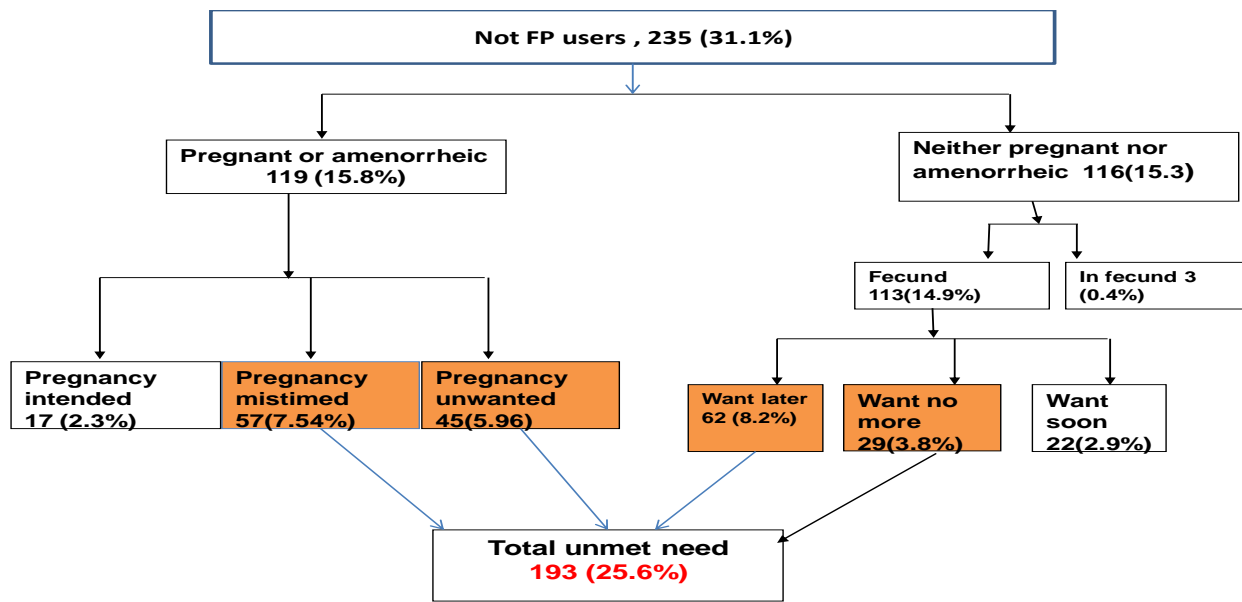
Out of 755 married women, 520 (68.9%) were current users of FP methods; of these, 369 (48.9%) were using for spacing and 151 (20%) for limiting. The contraceptive prevalence rates for urban and rural residents were 266 (70.7%) and 254 (67%) respectively. The main reasons for not using FP methods for both urban and rural residents were health concern and fear of side effects 74 (38.34%), less perceived risk of pregnancy 51 (26.42%), opposition from partners 18 (9.33%), religious prohibition 17 (8.81%), familial opposition 17 (8.81%), ambivalence to plan when to get pregnant 15 (7.77%) and availability of preferred methods 8 (4.15%). The main reasons for not using FP

methods for 29 (31.5%) urban and 45 (41.7%) rural study subjects were health concerns and fear of side effects followed by less perceived risk of pregnancy 25 (27.2%) and 26 (24.1%) for urban women and rural respectively.

f) Unmet need for family planning

The overall unmet need for FP was 193 (25.6) of which 119 (15.8) was for spacing and 74 (9.8) for limiting (Figure 1).





22

Figure 1 : Illustration of calculated unmet need for family planning in Enemay district, Northwest Ethiopia, 2013

g) Factors associated to unmet need for family planning (urban)

Table 5 : The association of socio-demographic and other characteristics of married women with current status of unmet need for FP in the urban area of Enemay district, 2013

Variables	Unmet need for FP		COR (95% C.I)	AOR (95% C.I)	P-value (Overall)
	Yes	No			
Age of respondents					
15-19	3	6	3.1(1.28, 12.027)*	1.580(0.916, 2.314)	
20-24	11	49	1.891(1.014, 11.345)*	1.247(0.442, 10.462)	
25-29	12	72	1.03(0.342, 12.431)	1.621(0.239,11.860)	0.049
30-34	15	93	1.00	1.00	
35-39	14	61	1.423(0.208, 10.282)	1.094(0.708, 2.452)	
>=40	14	26	3.34(2.701, 11.319)*	2.605(1.105, 4.003)*	
Age at first marriage					
<18	62	194	1.00	1.00	
>=18	7	113	0.193 (0.229, 0.433)*	0.390 (0.282, 0.649)*	0.001
Educational status of respondent					
No formal education	58	172	1.00	1.00	
Primary education	9	56	0.491 (0.477, 0.825)*	0.145 (0.134, 1.479)	
secondary and above	2	79	0.082 (0.075, 0.420)*	0.201 (0.130, 0.213)*	0.001
Educational status of husband					
No formal education	28	117	1.00	1.00	
Primary education	12	93	0.671 (0.539, 0.935)*	0.078 (0.037, 3.134)	
Secondary and above	28	91	0.308 (0.201, 0.470)*	0.231 (0.144, 0.295)*	< 0.001
Do not know	1	6	0.696 (0.420, 1.384)	0.294 (0.281, 2.881)	
Occupational status of respondents					
House wife/ farmer	233	55	1.00	1.00	
Government employee	6	25	0.057 (0.018, 0.585)*	0.239 (0.232, 0.411)*	0.027
Merchant/other private work	8	49	0.041 (0.027, 0.345)*	0.200 (0.128, 2.300)	
Visited by a healthcare providers in the last 12 months					
Yes	31	180	1.00	1.00	
No	38	127	1.737 (1.014, 8.279)	2.630 (1.452, 6.926)*	0.048
Partner attitude towards FP use					
Approve	32	238	1.00	1.00	

Disapprove	36	17	3.494 (2.652,8.407)*	2.080 (1.460, 9.408)*	0.036
Neutral	20	33	0.222 (0.103, 1.056)	0.481 (0.225, 2.716)	
Discussion with partner about FP					
Yes	22	197	0.261 (0.152, 0.917)*	0.233 (0.231, 2.328)	0.057
No	47	110	1.00	1.00	
Preplanned number of children (before first pregnancy)					
Decided	32	148	1.00	1.00	
Did not decided	37	156	1.097 (1.013, 4.34)*	1.871 (1.208, 6.147)*	0.004

\* Significant at p-value <0.05

Bivariate and multivariate logistic regression analysis of possible explanatory variables over unmet need for FP was carried out. While controlling for possible confounders, the age group of 40 and above were 2.605 (AOR=2.605, 95%CI: 1.105-4.003) times more likely to have unmet need for FP compared to age groups of 30-34 years. Women with age at first marriage at 18 and above and government and non-government employees were less likely to have unmet need for FP when compared to marital age less than 18 and housewife/farmer with (AOR=0.282, 95%CI: 0.139-0.649) and (AOR=0.239; 95% CI: 0.232-0.411) respectively.

Women and their partners with educational level of secondary and above (AOR=0.201; 95%CI: 0.13-0.213) and (AOR=0.231, 95%CI: 0.144-0.295)

respectively were also less likely to have unmet need for FP when compared to with no formal education.

Married women who had not been visited by healthcare providers within the last 12 months prior to the study were 2.63 times more likely to have unmet need for FP compared to women who had been visited (AOR=2.630, 95%CI: 1.452-6.926). Moreover, married women whose partners did not support the use of FP methods were 2.08 times more likely to have unmet need compared to those whose partners support FP use (AOR=2.08, 95%CI: 1.46-9.408).

On the other hand, married women who had not decided their total number of children before their first pregnancy were 1.871 (AOR=1.871, 95%CI: 1.208-6.147) times more likely to have unmet need for FP than their counter parts.

*h) Factors associated to unmet need for family planning (rural)*

**Table 6:** The association of socio-demographic and other characteristics of married women with current status of unmet need for FP in the rural area of Enemay district, Northwest Ethiopia 2013

Explanatory Variables	Unmet need for FP		COR (95 % C.I)	AOR (95 % C.I)	P-value (overall)
	Yes	No			
Age of respondents					
15-19	13	18	3.00(1.411, 14.247)*	2.357 (1.689, 5.691)*	<0.001
20-24	11	41	0.869 (0.757, 1.840)	2.630 (1.347, 8.262)*	
25-29	28	48	2.425(1.326, 10.609)	2.018 (1.525, 4.820)*	
30-34	19	79	1.00	1.00	
35-39	24	31	0.774 (0.454, 1.319)	0.243 (0.046, 1.278)	
>=40	29	38	0.763 (0.471, 1.237)	0.207 (0.040, 1.082)	
Age at first marriage					
<18	104	204	1.00	1.00	0.003
>=18	20	51	0.769 (0.537, 0.984)*	0.260 (0.189, 0.368)*	
Educational status of respondent					
No formal education	107	205	1.00	1.00	<0.001
Primary education	13	39	0.639 (0.478, 0.980)*	0.355 (0.280, 0.831)*	
secondary and above	4	11	0.697 (0.519, 0.871)	0.324 (0.053, 0.999)*	
Educational status of husband					
No formal education	191	79	1.00	1.00	0.01
Primary education	26	51	0.210 (0.108, 0.618)*	1.780 (0.833, 3.804)	
Secondary and above	18	12	0.620 (0.435, 0.804)	0.428 (0.319, 0.895)*	
Don't know	1	1	1.000 (0.063, 15.988)	9.477 (0.230, 30.221)	
Ever discussed about FP methods with healthcare providers					0.033



Yes	67	178	0.508 (0.284, 0.926)*	0.245 (0.224, 0.808)*	
No	57	77	1.00	1.00	
Are you menstruating					
Yes	53	158	0.506 (0.439, 0.816)*	0.3619 (0.209, 0.696)*	< 0.001
No	67	101	1.00	1.00	
Partner attitude towards FP use					
Approve	69	192	1.00	1.00	0.006
Disapprove	35	30	1.925 (1.760, 10.051)	3.732 (1.293, 4.770)*	
Neutral	20	33	0.593 (0.348, 1.056)	0.375 (0.254, 4.086)	
Discussion with partner about FP					
Yes	40	138	0.404 (0.138, 0.819)*	0.250 (0.225, 2.205)	0.510
No	84	117	1.00	1.00	
Desired number of children					
Decided	49	89	0.388 (0.248, 0.780)*	0.724 (0.343, 2.494)	0.184
Didn't decided	164	74	1.00	1.00	

\* Significant at p-value <0.05

As age increased, the level of unmet need was decreased and age groups of married women 15-19, 20-24 and 25-29 were positively and significantly associated to unmet need for FP when compared to age group 34-39 with (AOR=2.357, 95%CI: 1.689-5.691), (AOR=2.630, 95%CI: 1.347-8.262) and (AOR=2.018, 95%CI: 1.525-4.820) respectively.

Age at first marriage 18 and above was negatively and significantly associated to unmet need for FP compared to marital age of less than 18 (AOR=0.260, 95%CI: 0.189-0.368). On the other hand, primary as well as secondary and above educational level of married women were negatively and significantly associated to unmet need for FP when compared to no formal education (AOR=0.355, 95%CI: 0.280-0.831) and (AOR=0.324, 95%CI: 0.053-0.999) respectively. Moreover, married women whose husbands' educational levels of secondary and above were less likely to have unmet need for FP compared to those whose partners had no education (AOR=0.428, 95%CI: 0.319-0.895).

Married women who had ever discussed about FP issues with healthcare providers were also less likely to have unmet need for FP than their counterparts. Currently menstruating was significant predicting factor for unmet need for FP (AOR=0.3619, 95%CI: 0.209-0.696). On the other hand, married women whose partners do not support the use of FP methods were 3.73 times more likely to have unmet need for FP services compared to those whose partners support FP use (AOR=3.73, 95%CI: 1.293-4.770) (Table 7).

#### IV. DISCUSSION

The prevalence of unmet need for FP services was 25.6%, which is comparable to the national prevalence (25.3%) and is slightly higher than in eastern Nepal (21.7%) and in Amhara region, Ethiopia (22.1%) (ICF International, 2012; Sellen D., 2012); this figure is lower than the prevalences Endersa, Tigray region

(48%), Butajira (52.4%), Belesa (39.5%) and Kobo (47.3%) (Assefa H, 2011; Ghebreselasie R, 2006; Awang N. L, 2011). These variations might be attributed to the expanding health services coverage and increased awareness of FP and maternal health services. In most parts of Ethiopia, rural residents are usually of low education and socioeconomic status and have limited access to FP services. This study also revealed that the prevalence of unmet need for FP in urban and rural areas were 18.4% and 32.7% respectively; the discrepancy was wider than the national figure which was 15% and 27.5% (ICF International, 2012). Higher unmet need in rural areas might reflect limited awareness and acceptability of FP services in rural areas.

About two-third married women were FP method users; this is higher than in Kobo, northern Ethiopia (38%) (Choudhary S, 2011); the variation might be due to increased awareness on FP.

Women who married before their 18 birth anniversary were more likely to have unmet need in both areas. This might show awareness of legal marriage in the rural area was inadequate and on the other hand women who marry at their 18 and above were able to plan and manage their family size because they had more exposure to FP methods and were mature enough to do so.

Only 26% of urban and 18.3% of rural respondents had discussed about family planning issues with their partners. This was lower than a study from Belesa, north Gondar that revealed around 45% of wives had experiences of FP discussion with partners (Mihret N, 2008). The possible reason for this difference might be inadequate behavioral change communication in the area.

As the educational status of women improves they would have more awareness about the FP services and hence unmet need decreases. These findings were supported by the Demographic and Health Survey analysis of Kenya which indicates better educated

women – secondary level or higher have considerably less unmet need (17%) than women with little or no education (26%) [38]. Husband educational level secondary and above was also negatively associated with unmet need for FP in both urban and rural residents; a study in Butajira district revealed a similar pattern (Mekonnen W. and Worku A, 2011).

The main reasons for not using FP methods for both urban and rural residents were health concerns and fear of side effects, less perceived risk of pregnancy, religious prohibition, familial opposition and ambivalence to plan when to get pregnancy; these findings were supported by the findings of a studies done in Nigeria and Iraq (Laya K.S, 2012).

Discussion with health care providers about FP issues was negatively and significantly associated to unmet need for FP, this is in line with studies done in Kobo, Northern Ethiopia Awang N. L, 2011) and Nigeria (Laya K.S, 2012). Menstrual status of married women was significantly associated to unmet need for FP in the rural area but not in urban area; this might be due to their misperception of less likely to become pregnant in the absence of menstruation.

The overall prevalence of unmet need for FP was high; age at first marriage, educational status of respondents and partners and partner attitude towards FP use were independent predictors of unmet need for FP in both urban and rural areas.

Moreover, desired number of children, healthcare providers visit, age of respondent, menstrual status and discussion about FP were the main predicting factors of unmet need for FP.

The local government should strive to create awareness and implement the legal age for marriage so as to increase marital age at least to 18 years and above to contribute for the decrement of unmet need for FP.

Health extension workers should strengthen the visiting and awareness creation of women and their partners towards the importance of FP services utilization; education for women should be scaled up.

## V. ACKNOWLEDGEMENTS

We would like to thank Debremarkos University and Gamby College of Medical Sciences for their financial support; we would like to extend our gratitude to all the study participants.

## REFERENCES RÉFÉRENCES REFERENCIAS

1. Cleland J. (2006). "Family planning: the unfinished agenda". *The Lancet*, 368, 1810-1827.
2. Sadia C. (2010). Determinants and Consequences of High Fertility. Synopsis of the Evidence. Retrieved from <http://www.worldbank.org/hnppublications>.
3. Igwegbe A. O., Ugboaja J. O. and Monago E.N. (2009). Prevalence and determinants of unmet

- need for family planning in Nnewi, south-east Nigeria. *International Journal of Medicine and Medical Sciences*, 1(8), 325-329.
4. Bradley, Sarah E.K., Trevor N. Croft, Joy D. Fishel, and Charles F. Westoff. (2012). *Revising Unmet Need for Family Planning*. DHS Analytical Studies No. 25. Calverton, Maryland, USA: ICF International.
5. Adébiyi Germain B. and Simona B. (2001). *Family Planning and Child Mortality Rate Decline in Sub-Saharan Africa*.
6. Beekle A.T. & McCabe C. (2006). Awareness and determinants of family planning practice in Jimma, Ethiopia. *International Nursing Review*, 53, 269–276.
7. John A. Ross and William L. Winfrey. (2002). "Unmet Need for Contraception in the Developing World and the Former Soviet Union: An Updated Estimate," *International Family Planning Perspectives*, 28(3).
8. Susheela S. and Jacqueline D. (2012). *Adding It Up: Costs and Benefits of Family Planning Services, Estimates for New York: Guttmacher Institute*.
9. David O. (2008). Trends and Determinants of Unmet Need for Family Planning in Kenya, 56.
10. Conference on Family Planning: Research and Best Practices. Munityonyo, Uganda. (2009). Retrieved from <http://www.fpconference2009.org>International.
11. Central Statistical Agency [Ethiopia].Ethiopia Demographic and Health Survey 2011. (2012) Addis Ababa, Ethiopia and Calverton, Maryland, USA: ICF International.
12. Henry E., Kibret M. A., Yigezu Y. T. and Oliveras E. (2011). Addressing Unmet Need for Long Acting Family Planning in Ethiopia: Uptake of Implanon and Characteristics of Users.
13. Shea O. Rutstein, (2005). "Effects of Preceding Birth Intervals on Neonatal, Infant and Under-Five Years mortality and nutritional status in developing countries: Evidence from the demographic and health surveys," *International Journal of Gynecology and Obstetrics* 89, S7-24.
14. Fantahun M. (2005). Quality of family planning services in northwest Ethiopia. *Ethiop.J.Health Dev.*, 19(3):195-202.
15. Mueller R. and Germain A. (2007). Fertility Regulation and Reproductive Health in the Millennium Development Goals: The Search for a Perfect Indicator. *American Journal of Public Health*, 97 (1).
16. Choudhary S., Saluja N., Sharma S., Gaur D., Pandey S. (2011). The extent and reasons of unmet need for family planning among women of reproductive age group in rural area of Haryana. *The Internet Journal of Health*, 12 (1). Retrieved from DOI: 10.5580/1bc2.
17. Bhandari G.P., Premarajan K.C., Jha N. (2006). Prevalence and determinants of unmet need for family planning in a district of eastern region of

- Nepal. Kathmandu University Medical Journal, 4 (2), Issue 14, 203-210.
18. Sellen D., Sharif S., Tefera B. and Hyder Z. (2012). Strengthening Family Planning with Community-based Nutrition interventions in Ethiopia. The World Bank, 1818 H Street, NW, Washington DC 20433. Retrieved from <http://www.worldbank.org/hnppublications>.
  19. Molla G. and Belete H. (2011). Unmet need for family planning and its determinants among currently married women in Kobbo woreda, North-East of Amhara. Ethiopian Journal of Reproductive Health, 5(1): 2-9.
  20. Hameed W., Khurram A.S, Bilgrami M. and Ishaq M. (2011). Determining the factors associated with Unmet need for family planning: a cross-sectional survey in 49 districts of Pakistan. PJP, 1(1).
  21. United States Agency for International Development (USAID). (2005). Strengthening family planning policies and programs in developing countries: an advocacy toolkit. Policy project. Retrieved from <http://www.policyproject.com>.
  22. Sedgh G., Hussain R., Bankole A. and Singh S. (2007). Women with an Unmet Need for Contraception in Developing Countries and Their Reasons for Not Using a Method. Occasional Report No. 37. New York: Guttmacher Institute.
  23. Gordon C., Sabates R., Bond R., and Wubshet T. (2011). Women's Education and Modern Contraceptive Use in Ethiopia. International Journal of Education, 3 (1): ISSN 1948-5476.
  24. Woldemicael G. and Beaujot R. (2011). Currently married women with an unmet need for contraception in Eritrea: Profile and determinants. Canadian Studies in Population, 38: 1-2.
  25. Ahmadi A. and Iranmahboob J. (2005). Unmet need for family planning in Iran. XXV IUSSP International Population Conference, 18-23.
  26. Laya K.S. (2012). Prevalence and Determinants of Unmet Need for Family Planning among Women in India. Research and Social practices in Social Sciences, 7 (2):59-70.
  27. Gizaw A. and Regassa N. (2011). Family planning service utilization in Mojo town, Ethiopia: A population based study. Journal of Geography and Regional Planning, 4 (6): 355-363.
  28. Sita S. (2003). Assessment of the magnitude, determinant of unmet need for family planning. Ethiopia Addis Ababa.
  29. Mihret N. (2008). Determinants of unmet need for contraception among currently married couples in west belessa woreda, North gondar of amhara, Ethiopia.
  30. Assefa H. (2011). Factors Affecting Unmet need for family planning. Ethiop J Health Sci., 21 (2).
  31. Gribble J.N. Unmet Need for Family Planning. Population reference Bureau. Retrieved from <http://Publications/Datasheets/2012/world-population-data-sheet.aspx>.
  32. Mekonnen W. and Worku A. (2011). Determinants of low family planning use and high unmet need in Butajira District, South Central Ethiopia. Journal of reproductive Health, 8-37. Retrieved from <http://www.reproductive-health-journal.com/content/8/1/37>.
  33. Ghebreselasie R. (2006). Magnitude and determinants of unmet need and Barriers of family planning (among wives, husbands and couples) in Enderta district, Tigray region Ethiopia. Addis Ababa University.
  34. Awang N. L. (2011). The effect of counseling in meeting the unmet need for family planning. Ateneo de Zamboanga University.
  35. NCAPD Policy Brief. (2010). Fulfilling Unmet Need for Family Planning Can Help Kenya Achieve Vision 2030, 13.
  36. Ashenafi G. (2011). Assessment of unmet need for family planning and factors influencing modern contraceptive utilization among women of reproductive age group in Girar Jarso District, North Shoa Zone, Oromia National Regional State, Ethiopia. Addis Ababa University.
  37. Klima C. (1998). Unintended pregnancy: Consequences and solutions for a worldwide problem, Journal of Nurse-Midwifery, 43(6):483-491.
  38. Lisa B., Nawal M. (2009). women's health in the developing world. Reviews in Obstetrics & Gynecology, 2 (2).
  39. Campbell O. and Graham W. (2006). Strategies for reducing maternal mortality: getting on with what works. Lancet, 368 (9543), 1284-1299.
  40. Shea O. Rutstein. (89 (2005). "Effects of Preceding Birth Intervals on Neonatal, Infant and Under-Five Years, Mortality and Nutritional Status in Developing Countries: International Journal of Gynecology and Obstetrics, S7-24.
  41. Sedgh G., B. Akinrinola A. and O. B. (2006). Unwanted Pregnancy and Associated Factors among Nigerian Women. International Family Planning Perspectives, 32 (4).
  42. Guttmacher Institute/Ethiopian Society of Obstetricians and Gynecologists. (2010). Benefits of Meeting the Contraceptive Needs of Ethiopian Women. In Brief (Washington, DC: Guttmacher Institute/UNFPA, 2010).