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## **The Magnitude and Factors Associated with Unmet Need for Family Planning Among Married Women in Jigjiga City Administration, Somali Region, Eastern Ethiopia**

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### **Abstract**

Knowledge of family planning has increased to 87% among currently married women. However, it is still lagging as, about 22% of young married women and 26% of sexually active unmarried women in this country are reported having an unmet need for family planning. Ethiopia is one of the highest unmet need for family planning according to EDHS-2016 but the level and factors that determine unmet need for FP are not well understood. This study assess the magnitude and factors associated with unmet need for family planning among married women of urban and rural communities in Jigjiga city administration. A community based cross-sectional study design was used, with 375 households. Sampling frame was used listing all households in the selected kebeles (smallest administration units) in which married women resided. A structured questionnaire adopted from literature was used. Data was checked, edited, coded and entered into EPIDATA version 3.1 and transported to SPSS version 23 for analysis. Bivariate and multivariate logistic regression was carried out to see any associations between outcome and explanatory variables and P-Value of 0.05 was considered significant. This study revealed that 22.6 % of married women had unmet need for family planning out of which, 68(21.5%) was for spacing and 4(1.1%) for limiting.

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In this study, unavailability of health facility that provide family planning services was 2.3 (AOR=2.31, 95%CI: 1.087, 4.912 1.042, 4.3) times more likely to have unmet need for FP than those who had. Women who desire to have more than or equal to ten children were 3.7 (AOR=3.7, 95%CI:1.427, 9.822) times more likely to have unmet need for FP than those who desired to have less than ten children and FP practice (non-user and ever-users) were 8 [(AOR=8.8, 95%CI: 1.327, 58.61) and (AOR=8.5, 95%CI: 1.552, 46.04)] times more likely to have unmet need for Family planning than those of current users. It also concluded that the overall prevalence of unmet need for FP among married women in Jigjiga city administration was high compared to EDHS-2016 of Somali region and availability of health facility providing FP services, desire to have more children, and family planning practice (Ever-users and Non-users) were associated with unmet need for Family planning.

**Keywords:** Unmet Needs; Family Planning; Jigjiga; Somali region; Ethiopia.

## **1. Introduction**

Unmet need for family planning has been an issue of fertility research since the 1960s when knowledge, attitude, and practice (KAP) surveys revealed a “KAP gap” in many countries.[1, 2]. Unmet need for family planning is those women who are fecund, sexually active, not using any method of contraception and reporting that they want to limit or space their child birth. [3]. The discrepancy between reproductive intentions and birth control practices was termed as “discrepant behavior” or “KAP-gap” or “unmet need” [2, 4-6]. Women are considered to have an unmet need for spacing if they are: at risk of not using contraception, do not want to become pregnant with n the next two years and they are considered an unmet need for limiting if they are: at risk of becoming pregnant, not using contraception, and want no (more) children, pregnant with an unwanted pregnancy and postpartum amenorrhea for up to two years following an unwanted birth and not using contraception[3, 7].

World population was 2 billion in 1825 and 3 billion in 1927, during this period, there was immensely little population growth but in last seven decades population has boomingly increased from three billion to 7 Billion in 2015 and developing countries in Africa ( Sub-Saharan Africa) and Asia are severely characterized in rapid population growth due to high fertility and decline in death rates that hinders the realization of improved child and maternal health services and in this regard family planning has the potential of reducing 32% of all maternal deaths and 10% of child deaths[8]. If all women with unmet need for family planning were able to use contraceptive, 24 million abortions out of which 14 million were unsafe, 6 million miscarriages, 700,000 maternal deaths and 500,000 Infant deaths annually would be prevented [9].

Family planning allows people to attain their desired number of children and determine the spacing of pregnancies. It is achieved through use of contraceptive methods and treatment of infertility. Family planning is key to slow unsustainable population growth, negative impacts on the economy, environment, and national and regional development efforts. It also affects woman’s ability to choose if and when to become pregnant which has direct impact on her health and well-being[10].Demand for family planning is high among young unmarried women, in countries like Haiti and Mozambique where almost half of unmarried women aged 15 to 19 years have unmet need for family planning. In married women, less than 20% use Family planning in most African

and Asian countries. In Sub-Sahara Africa, 25% of married women have unmet need for family planning [11].

Global efforts to improve women's and children's health and increase access to family planning information, services, and supplies mean an increased demand for frequent, comparable, and timely estimates of family planning indicators to monitor progress, but as per family planning data indicators of 194 countries, about 43% of the countries had no data of unmet need of family planning in 2012 and 65% of them didn't have data of unmet need for family planning since 2005[12]. In Ethiopia, family planning services began in 1966 with the establishment of the Family Guidance Association of Ethiopia (FGAE), an International Planned Parenthood Federation affiliate. In 1980s Federal Ministry of Health (FMOH) added family planning to its maternal and child health program. The first national survey on CPR was done 1990 and found to be only 2.3%[13].

In Ethiopia, the second most populous country in Africa with population size of over 90 million and a growth rate of about 2.6 percent in 2015 the population is projected to reach 112 million by 2020. Rural population constitutes 85 percent of the total population and is mainly dependent on farming and animal husbandry. This fast population growth is an obstacle for better living of families. Family planning is the best tool for tackling fast population growth which affects both human health and economy [14]. Although Ethiopia made improvement for CPR which was 8% in 2000 and 42% in 2014, but still there is high unmet need for family planning about 25%. There are also huge disparities between rural and urban communities and among regions; Addis Ababa has the highest CPR (64%) for married women, and the Somali region has the lowest, with less than 2% of married women using any modern contraceptive method[7]. Amongst married women reporting unmet need, nearly 2/3(16%) expressed a desire to space their pregnancies, whereas the remaining one-third (9%) expressed a desire to limit /cease childbearing. Women in rural areas reported higher levels of unmet need at 27%, compared with urban areas, at 15%[11].

In Ethiopia; studies have shown that the factor which contribute most to maternal death was pregnancy related especially unintended or mistimed pregnancies. EDHS 2000-2011 analysis done by UNFPA in 2012 revealed that Somali region was most exposed to high-risk pregnancy (34.4%), followed by SNNPR, Afar, Tigre and the lowest risk in Addis-Ababa. Women's and men's education was the most common predictor of women's exposure to high-risk pregnancy[9]. Somali region has one of the highest unmet need for family planning according to EDHS-2016 but the level and factors that determine unmet need for family planning are not well understood in this subgroup of population. Therefore, this study has aimed to assess the magnitude and associated factors of unmet need for family planning among married women of Jigjiga city administration in Somali Region state, eastern Ethiopia.

## **2. Methodology**

### **2.1. Study settings**

The study was conducted in Jigjiga city administration of Somali Regional state of Ethiopia from June 30 – October 30, 2017. Jigjiga town is the capital city of Somali regional state located 626 km east from Addis Ababa, capital city of Ethiopia. As of 2009 EFY Jigjiga city administration has a total population of 426,122 out

of which 85,650 are in reproductive age group (15-49 years). The city has 30 kebeles (smallest administration units) out of which 20 are urban and 10 are rural. most of the people are of Somali ethnicity (97%) and Muslim (98%)[15]. Jigjiga town has two health centers, one General Hospital, one Referral Hospital, one Private Hospital, 10 Health Posts and about 15 private clinics. The two health centers and 10 health Posts which are directly administered by Jigjiga city administration the contraceptive acceptance rate of Jigjiga town was 52%, Injectable contraceptives was the most common method used in Jigjiga according to (HMIS Report of Jigjiga city Health Office).

## ***2.2. Study design and sample size determination***

A community-based cross-sectional study using quantitative method was used to assess the magnitude and associated factors of unmet need for family planning among married women of Jigjiga city administration in Somali Region state of Ethiopia. From these married women, study subjects were drawn and data was collected from those who tend eligible. All married women of selected urban and rural kebeles (smallest administration units) of Jigjiga city administration, residing in Jigjiga for more than 3 consecutive months before the beginning of this survey were included in the study. Sample size was calculated for both first and second objectives, first objective using single population, since there was similar study from Ethiopia with similar settings[16], population proportion was taken 26.5% with 5% margin of error and 95% confidence interval. By replacing these values with the formula inserting this into EPI info version 7, we got 299. Although the sample size was very small and may not be representative, we calculated second objective for women's education[17] which revealed 40% were knowledgeable and 60% were not knowledgeable. Generally, sample sizes have been calculated for the first and the second objectives and the largest sample size was found to be 368 for the second objective. So, assuming 2% of non-respondent rate the total sample size was 375 participants.

## ***2.3. Sampling procedure***

Systematic random sampling technique was used to select study participants. Jigjiga city administration was stratified into urban and rural kebeles (smallest administration units), 8 Kebeles from urban and 4 kebeles from rural were selected by simple random sampling (lottery method). A proportional allocation was employed to obtain sample size of each kebele  $K^{\text{th}}$  value of each kebele was calculated and first household was selected randomly from the interval and systematic sampling was applied to other households until total sample size was reached. The list of all households in the selected kebeles and list of married women was obtained from the kebeles administration.

## ***2.4. Data collection procedure and quality control***

Data was collected using structured questionnaire adapted from other literatures and EDHS 2016 document. Then questionnaire was adopted in English and translated into Somali and Amharic languages. Data collectors/research assistants and field supervisors were trained prior to data collection schedule. They were recruited based on their related professional background. Study tool was pre-tested on 5% of households in other than selected kebeles. Data entry, checking, coding, editing, clearing and double data entering was done using

EPIDATA 3.1.

## **2.5. Data Processing and Analysis**

The data was entered into Epidata and exported to SPSS version 23 for analysis. Description of means, proportions and rates of the given data for each variable was calculated. Bivariate analysis was carried out to see the association of each independent variable with the outcome variable and those predictor variables which had p-value of less than 0.25 were entered into the multivariate logistic regression model to identify the effect of each explanatory variable on the outcome variable. A p-value less than 0.05 was considered statistically significant and adjusted Odds ratio (AOR) with 95% CI was calculated to see any association

## **2.6. Ethical considerations**

Ethical clearance was obtained from the Institutional Health Research Ethics Review Committee of the College of Health and Medical sciences, Haramaya University (IHRERC) and was delivered to Somali Regional Health Bureau (SRHB) and Jigjiga city administrations and their official permission was obtained. Letters were prepared to the local authority of the selected kebeles. Voluntary written and signed informed consent was secured from each participant. Confidentiality has been maintained at all levels of the study. Selection of participants was made on their own consent; and were told the voluntary nature of the study and that they could withdraw any time they wanted. Women who were not using the family planning but were willing to use were directed to the nearest health facility to use FP.

## **3. Results**

The data was collected from 375 women, having respondent rate of 367(98%). Out of 367 women, 317 (86.4%) were from urban community out of which 58(22.3%) had unmet need for FP and 50(13.6%) were from the rural community out of which 25(50%) had unmet need for FP. The reason for non-response was that they were not willing to answer the questions related to their fertility.

### **2.7. Socio-demographic characteristics of the study participants**

The age of the respondents ranges from 15-49 years. The mean age of women was 28.7 with SD =7.5 and one third of the women were of more than 35 years (33%). More than three fourth of the women were Somali 294(80.1%), followed by Amhara 32(8.7%) and Oromo 24(7.1%). More than one third of women 135(36%) and 73(19.9%) of their partners were illiterate respectively whereas 61(16.6%) of women and 185(50%) of their partners were having Higher education (College/University). more than four fifth of respondents and their partners were Muslim 315(85.8%) followed by Orthodox 44(12%). About 249(67.8%) of women and 21(5.7%) their partners were unemployed whereas 78(21.3%) of women and 242(65.9%) of their partners were employed and 72(19.6%) of the partners were farmers/merchants. The maximum and minimum family size was 15 and 2 persons respectively; the average family size was 5. 85% of respondents replied that their monthly income was more than 1001ETB in case of 13.1% it was less than 1000ETB.

**Table 1:** Socio-demographic characteristics of Married women in Jijiga city admin, Jul-Oct 2017

<b>Variables</b>	<b>Frequency (n=367)</b>	<b>Percent (%)</b>
Urban	317	86.4
Rural	50	13.6
<b>Age of woman</b>		
15-24	111	30.2
25-34	174	47.4
35-44	61	16.6
≥45	21	5.7
<b>Woman's Education</b>		
Unable to read or write (Illiterate)	135	36.8
Primary Education (1-8 <sup>th</sup> )	89	24.3
Secondary Education (9-12 <sup>th</sup> )	82	22.3
Higher Education (College/University)	61	16.6
<b>Partner Education</b>		
Unable to read or write (Illiterate)	73	19.9
Primary Education (1-8 <sup>th</sup> )	39	10.6
Secondary Education (9-12 <sup>th</sup> )	70	19.1
Higher Education (College/University)	185	50.4
<b>Woman Ethnicity</b>		
Somali	294	80.1
Oromo	26	7.1
Amhara	32	8.7
Others	15	4.1
<b>Woman's religion</b>		
Muslim	315	85.8
Orthodox	44	12
Others	8	2.2
<b>Woman's Occupation</b>		
Unemployed/Housewife	249	67.8
Employed	78	21.3
Student	12	3.3
Merchant	28	7.6
<b>Partner Occupation</b>		
Unemployed	21	5.7
Employed	242	65.9
Student	22	6.0
Merchant/Farmer	82	22.3
<b>Monthly Household Income</b>		
≤ 1000	48	13.1
≥ 1001	319	86.9
<b>Family size</b>		
1-4	161	43.9
5-9	171	46.6
≥ 10	35	9.5

### 2.8. Reproductive factors among married woman participant

Age at first marriage of the respondents was noted as early as 13 years and as late as 35 years, while the median age at marriage of the study subjects was 19 years. Among of the 367 women, age at first delivery ranged from 14years (0.3%) to 37 years (0.3). The median age was 21 years. The Percentage of women who had less than or

equal to 4 children was 243(68.4%) and those who had more than or equal to 10 children was 11(3.1%). Regarding the average number of children women desired to have in her lifetime was found to be 10 children.

**Table 2:** Reproductive factors of married women in Jigjiga city admin, Jul-Oct 2017

Variables	Frequency (n=367)	Percent (%)
<b>Age of Marriage</b>	<b>n=367</b>	<b>%</b>
10-19	196	53.4
20-29	167	45.5
≥30	4	1.1
<b>Number of Pregnancies</b>	<b>n=360</b>	<b>%</b>
≤4	223	61.9
5-9	106	29.4
≥10	31	8.6
<b>Number of A live children</b>	<b>n=353</b>	<b>%</b>
≤4	243	68.8
5-9	99	28.0
≥10	11	3.1
<b>Desired number of children</b>	<b>n=367</b>	<b>%</b>
≤4	38	10.4
5-9	82	22.3
≥10	247	67.3
<b>Pregnancy/Postpartum amenorrheic</b>	<b>n=367</b>	<b>%</b>
Yes	92	25.1
No	275	74.9
<b>Is the Pregnancy/Last child</b>	<b>n=92</b>	<b>%</b>
Intended	79	83.7
Mistimed	13	14.1
Unwanted	2	2.1
<b>Not pregnant/amenorrheic</b>	<b>n=275</b>	<b>%</b>
Yes	53	19.3
No	222	80.7
<b>If not using FP what would you like to have</b>	<b>n=222</b>	<b>%</b>
To have another child	214	96.4
No more child	2	0.9
I can't give birth	2	0.9
Undecided	4	1.8
<b>Spacing</b>	<b>n=214</b>	<b>%</b>
Less than 2 years	152	70.0
2 to 3 Years	46	21.5
3 to 4 Years	16	7.5
<b>Availability of HF that provide FP methods</b>		
Yes	244	66.5
No	123	33.5

Women who had current pregnancy and postpartum amenorrhoeic women were found to be 92(25.1%), out of which most of the women responded that their current pregnancy or last child was intended 79(85.9%) and about 11(12%) and 2(2.2%) were mistimed and unwanted respectively; Among those whose pregnancy/last child was mistimed or unwanted reported that the main reasons were contraceptive failure 5(38.5%), in case of 4(30.8%) and 1(7.7%) were pills and condom respectively and lack of knowledge about contraceptives 3(23.1%), was the second main reason. 49(53.3%) women out of the 92 women who were pregnant or postpartum amenorrhoeic said that they were willing to use family planning method in the future out of which 40(81.6%) said we will use for spacing and 9(18.4%) said for limiting. Most of the women 37(92.5%) said that they will space their children 2-3 years, pills 17(34.7%) and injectable 21(42.9%) respectively were the family planning methods women were willing to use. 39(42.4%) of women were not willing to use family planning in the future due to religion prohibition 11(25.6%) and desire to have more children 9(20.9%). Out of 275 married women who were not pregnant, 53(19.3%) said that they were currently using contraceptives while the remaining 222(80.7%) were not using any contraceptive methods. Out of 222 women, 150(67.6%) were willing to have children/space their children less than two years, 67(30.1%) said more than two years, 2(0.9%) said they can't give birth and 3(1.4%). 244(66.5%) said that they had health facility providing modern family planning methods and the rest didn't have; only 93(25.3%) had ever used family planning methods.

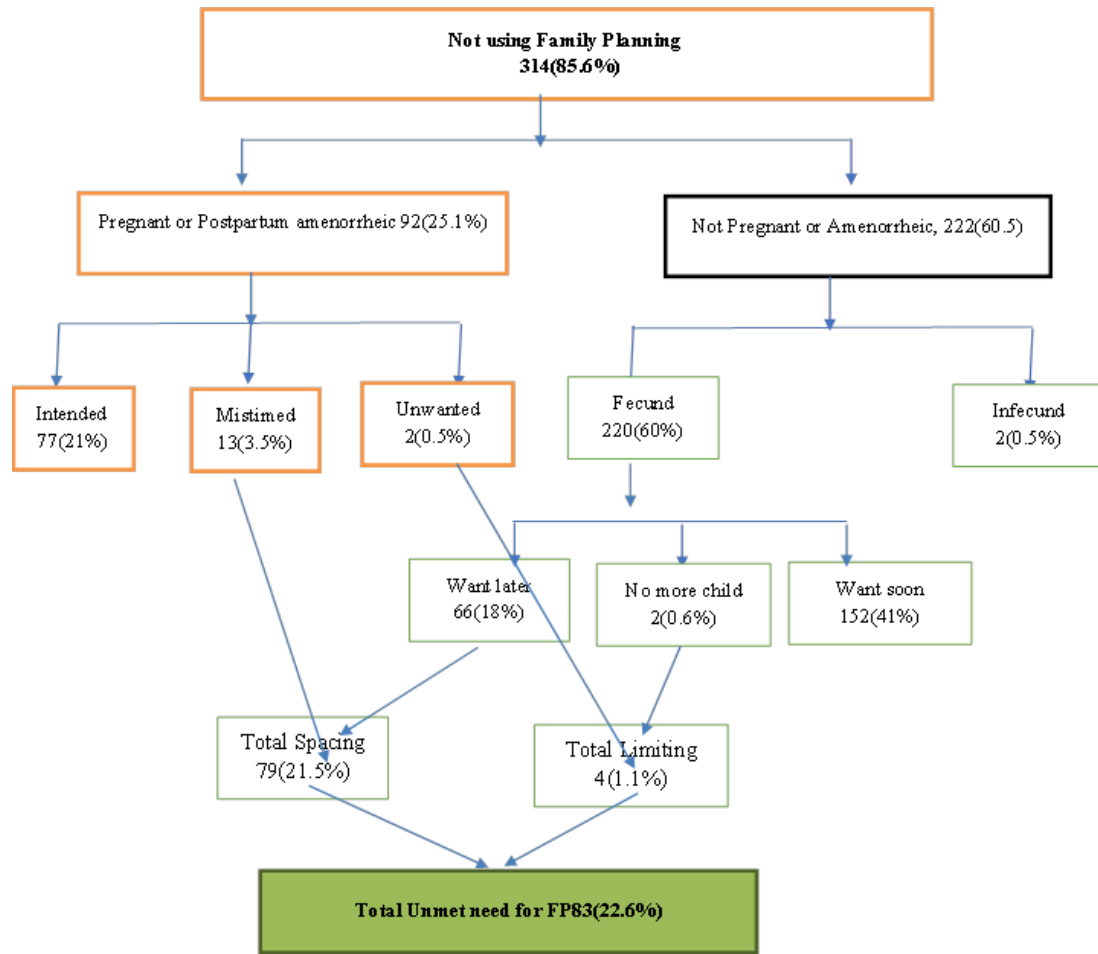
### **2.9. Magnitude of unmet need for family planning**

The overall unmet need for FP of married women in Jigjiga city administration was 83 (22.6%) of which 68(21.5%) was for spacing and 4(1.1%) for limiting. See (Figure 1).

### **2.10. Knowledge, Attitude and Practice of Family planning among Married women participants**

The issue of Family planning was familiar to most respondents as 311 (84.7 %) of the participants had ever heard about FP methods and 30% of the respondents had poor knowledge while 70% were having good knowledge about family planning. Government health facilities 219(70.4%), Mass media 156(50.2%) and Friends 110(35.4%) were the main source of information for the respondents; among the mass media most of them reported that they heard from television 147(94.2%). Eighty percent and seventy percent of the respondents said that FP methods could be found in hospital and health centers. Only 10% of the respondents said that they did not know the advantage of family planning. Regarding the attitude about 255(69.5%) of the respondents were willing to know more about family planning; also 194(52%) respondents said that they are supportive to other couples using contraceptives whereas 117(31%) were not supportive. About 130(35.4%) of respondents have said that they had discussion with their husbands about contraceptives and 227(61.9) had no discussion with their husbands. Participants responded that 121(33%) of their husband were supportive to contraceptives while 97(26.4%) and 149(40.6%) were not supportive and Do not know respectively. Only 53 (19.3%) of them were using contraceptives at the time of interview, whereas 41(11.2%) and 273(74.4%) respondents were ever-users and non-users. Among women who were not using contraceptives, the main reasons were: doesn't know about family planning (17.8 %), fear of infertility (17.5 %), and religious prohibition (16.8 %).





**Figure 1:** Prevalence of Unmet need for Family planning among married women of Jgijiga town both urban and rural community, Jul-Oct 2017

**2.11. Factors associated with unmet need for family planning among married women participants**

Bivariate and multivariate logistic regression analysis were done. In the analysis of bivariate logistic regression, variables with P-Value of < 0.25 were selected to further analysis and the following variables were associated with the outcome:

Age of woman, partner’s educational status, women’s occupation, partner occupation, desired number of children, pregnancy status, health facility providing FP, number of live children, number of pregnancies, house hold monthly income, family size, women who are supportive to other people using FP, women who wanted to know more about FP and family planning status.

In the multivariate analysis, desired number of children more than ten, having health facility that provides family planning, and status of FP (Ever-users and Non-users) were significantly associated with unmet need for family planning.

Women who had decided to have more than or equal to ten children were 3 times more likely to have unmet

need for FP than those who decided to have less than ten children (AOR=3.7, 95%CI: 1.427, 9.822).

Having health facility that provide family planning was 2.3 times less likely to have unmet need for family planning than those who did not have health facility providing FP (AOR=2.31, 95%CI: 1.087, 4.912 1.042, 4.3).

Ever-users and Non-users were both 8 times more likely to have unmet need for family planning than current users (AOR=8.8, 95%CI: 1.327, 58.61) and (AOR=8.5, 95%CI: 1.552, 46.04) respectively.

**Table 3:** Knowledge, Attitude and Practice of FP among married women of Jijiga city admin, Jul-Oct 2017

Variables	Frequency (n=367)	Percent (%)
Have you ever heard family planning methods		
Yes	311	84.7
No	56	15.3
Knowledge Status		
Good Knowledge	257	70
Poor knowledge	110	30
Source of Information		
Government Health Facility	219	59.7
Private Health facility	61	16.6
HEWs/HWs	66	18
Family	34	9.3
Friends	110	30
Mass media	156	42.5
Community volunteers	7	1.9
Best way to prevent unwanted/mistimed pregnancy		
Modern Family Planning methods	144	39.2
Natural Methods	108	29.4
Do not know	59	16.1
Where can you get family planning methods		
Hospitals	237	64.6
Health canters	210	57.2
Health post	107	29.2
FGAE clinic	8	2.2
Private clinic	32	8.6
Pharmacy/Drug shop/Vendor	61	16.6
Do not know	20	5.4
Advantages of Family planning methods		
To avoid unwanted pregnancy	123	33.5
To delay mistimed pregnancy	98	26.7
To space/limit number of children	207	56.4
To prevent STIs	16	4.4
Do not know	37	10.1
Attitude Status		
Positive Attitude	255	69.5
Negative Attitude	112	30.5

**Table 4:** Factors associated with unmet need for FP among married women of Jigjiga city administration, Jul-Oct 2017

Variables	Unmet need for FP (n=367)		AOR(CI)	P-Value <0.05
	No	Yes		
<b>Age of woman</b>				
15-24	87	24	1.026 (0.228 – 4.619)	
25-34	143	31	0.894(0.236 -3.388)	
35-44	40	21	2.09 (0.543- 7.435)	
≥45	14	7	1.00	
<b>Partner Education</b>				
Unable to read or write (Illiterate)	43	30	2.103(0.767 - 5.767)	
Primary Education (1-8 <sup>th</sup> )	26	13	1.473(0.538 - 4.032)	
Secondary Education (9-12 <sup>th</sup> )	54	16	1.441(0.622 - 3.338)	
Higher Education (College or University)	161	24	1.00	
<b>Woman's Occupation</b>				
Unemployed/Housewife	186	63	1.455(.551 - 3.842)	
Employed	70	8	1.00	
Student	11	1	1.000(.093 -10.760)	
Merchant/Farmer	17	11	3.057(.829 -11.275)	
<b>Monthly Household Income</b>				
≤ 1000	27	21	0.951(0.397 - 2.282)	
> 1001	257	62	1.00	
<b>Family size</b>				
1-4	133	28	1.00	
5-9	128	43	1.218(0.518 – 2.864)	
≥ 10	23	12	2.302(0.575 – 9.211)	
<b>Desired number of children</b>				
≤4	36	2	0.915(0.123 – 6.792)	
5-9	72	10	1.00	
≥10	176	71	3.744(1.427 – 9.822)	0.007*
<b>Current pregnancy or Postpartum amenorrhic</b>				
Yes	77	15	1.00	
No	207	68	1.446(0.692 – 3.025)	
<b>Availability of HF Providing FP services</b>				
Yes	209	35	1.00	
No	75	48	2.31(1.087 - 4.912)	0.030*
<b>Knowing more about FP</b>				
Yes	208	47	1.00	
No	76	36	0.727(0.303 - 1.743)	
<b>Support of other couples using contraceptives</b>				
Supportive	163	31	1.00	
Not supportive	79	38	5.100(0.456 – 57.015)	
No response	42	14	2.499(0.266 – 23.466)	
<b>Family Planning Practice</b>				
Current users	57	2	1.00	
Ever-users	24	6	8.82(1.327 – 58.61)	0.024*
Non-users	203	75	8.454(1.552 – 46.04)	0.014*

\*P value less than 0.25 was considered significant, \*\* p value <0.001 strongly significant, \* Desired number of children greater than ten, \* availability of health facility providing family planning, \*Status of FP (Ever-users

and Non-users) were significantly associated outcome. The result is summarized in (Table 6).

### **3. Discussion**

#### ***3.1. Level of unmet need for family planning among married women participants***

The objective of this study was to assess the magnitude and factors associated with unmet need for family planning among married women in Jigjiga city administration, the magnitude of unmet need of family planning among married women was 83 (22.6 %): CI 95%(18.3, 26.3), it was found that desired number of children, availability of health facilities and family planning practice were significantly associated with unmet need for family planning among married women. The unmet for FP in this study was found to be 22.6%, which was in line with that of Ethiopia demographic health survey (EDHS 2016) and Cameron study (20.4%)[18]. (22.3%) as per[7]. The similarity could be attributed to the similar characteristics of population of both countries and within the country in terms of culture, health seeking behavior, knowledge, and attitude of family planning; while this study was lower than the studies conducted done in Bellessa district of Amhara region (39.5%)[19], Puducherry of India (27.3%)[20] and Guangzhou and Qingdao of China (38.6%)[21]. This large variation may be due to expansion of health facilities and improved access of health services in Ethiopia which the implementation of health extension program may have the major attribution to lower the rate of unmet need. The magnitude of unmet need for FP in rural community of this study was (50%) which was higher than those in urban community (22.4%) and similar finding was found in analysis done by USAID in Demographic Health Surveys of African countries which showed that 27% of rural area and 15% of urban areas [11] had unmet need for family planning respectively; this difference may be linked to the health service accessibility of the urban areas which are more accessible than rural areas, also awareness creation of two the communities may differ. Another major contributor could be the fact that health care provisions of African countries are limited to urban areas and didn't reach the rural community, which indicates that awareness of rural community is suboptimal. In contrary the study conducted in Bangladesh was different from those studies which showed that unmet need for urban community (25%) is higher than that of rural community (12%) and this was due to the fact that the issue of family planning was not well addressed in the rural areas of Bangladesh which makes the matter unknown to the majority of the rural community and then the unmet need will be lower.

#### ***3.2. Factors associated with unmet need for Family planning among married women participants***

Woman's desire to have children was significantly associated with unmet need for FP in this study which similar findings were observed in the studies conducted in Burkinofaso,[22] Shire-Enda- Slassie, Northern West of Tigre[23] and Enemy district of Ethiopia[24] which all showed that women who had desire to have more children were more likely to have unmet need for family planning than those with less children; This similarity may be due to the awareness of both communities which is lower and majority of the respondents were not using family planning due fear of side effects which then can contribute a woman to have more children, also woman who marry before 18 years tend to have more children. On another hand the cultural and religious beliefs of study participants was another reason which may result woman to have more children. Participants who didn't have health facility that provided family planning service were 2.3 times more likely to have unmet need than those who had health facilities that provided family planning service and this was similar

to the study of EDHS 2000 and 2005 of SNNPR which also showed that having health facility and visiting health facility were less likely to have unmet need for FP[25]. This indicates that having health facility providing FP service may have positive impact in reducing unmet need for FP and this is because of the accessibility and availability of family planning services are reasons that contribute to lower the level of unmet need for family planning and vice-versa. Health facilities are main indicators for the uptake of family planning service; if health facilities are available in some areas, they will be more likely to have higher unmet need than other areas which have access to health facilities. Never users and ever users of any FP methods were 8 times more likely to have unmet need (AOR=8.82, CI: 95% (1.327 –58.61) and (AOR=8.454, CI: 95% (1.552 – 46.042) respectively than current users. The same finding were identified in the study conducted in Shire-Enda-Slassie, Northern West of Tigray [23]. This is because people who are currently using family planning are already committed to family planning services but the never users and ever-users have some limitation not to use family planning like: fear of side effect, partner/family support, cultural and religious beliefs.

### ***3.3. KAP of family planning among married women of Jigjiga city administration***

This study revealed that 70% of participants had good knowledge of family planning which was higher than the study conducted in Afar region (62%) [26] this discrepancy may be due to fact that the awareness creation of the two communities are not the same, which means the participants of this study were more aware than those in Afar; 69% of the respondents were willing to know more about family planning which can shows positive attitude. The same finding has been shown in studies done in Sudan,[27] and Afar region, of Ethiopia[26] and the similarity may be because of ideological and cultural beliefs of these communities are similar and they share same historical background which can result in similar thoughts and attitude about family planning. Regarding the use of contraceptives only 14.4% of participants in this study were using contraceptives which was lower than the study done in Jordan (37%) and this discrepancy may be due to the fact that the community of Jigjiga city administration was culturally resistant to the contraceptive use while in Jordan only methods of choice and knowledge related issues were the main reason for not using contraceptives [28]. Attitude of the person was one of the pertinent factors that mattered when it came to the use of service Participants who had positive attitude (70%) in this study is similar with study done in Sudan (72.5%) this is because both communities have same faith and culturally they are linked [27]

## **4. Conclusion**

The overall prevalence of unmet need for FP in Jigjiga city administration was high as compared to EDHS 2016 of Somali region Socio-demographic factors, reproductive factors, health infrastructure and KAP factors were independent factors of unmet need for FP, and desired number of children, availability of health facility that provide FP service, family planning practice were significantly associated with the outcome variable of this study

## **5. Recommendations**

Jigjiga city administration health office, SRHB, FOMH, and other concerned bodies should strengthen

community awareness about family planning services to reduce the level of unmet need, Religious and community leaders should also be involved to increase community awareness on availability and accessibility of family planning service, further as this study was quantitative, more quantitative and qualitative studies should be conducted, in other parts of the region especially rural areas which has showed high unmet need for family planning as compared to that of urban areas.

## **6. Limitations of the study**

The study design was a cross-sectional study which does not show cause-effect relationship between dependent and independent variables and only married female participants were studied while fertility is related for male and unmarried female as well. On other hand the study was only quantitative method which cannot give depth explanation why women are not using family planning.

## **7. Acronyms**

FP: family planning; EDSH: Ethiopia Demographic Health Survey; FoMH: Federal Ministry of Health; SRHB: Somali Regional Health Bureau; COR: Crude Odd Ratio; AOR: Adjusted Odd Ratio; KAP: Knowledge Attitude and Practice; CSA: Central Statistical Agency; CI: Confidence Interval; FGAE: Family Guidance Association of Ethiopia; CPR: Contraceptive Prevalence Rate;

## **8. Competing interest**

We, the authors declare that we don't have competing interests.

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