Utilization of Modern Contraceptive method and Associated Factors among married Women of Reproductive Age in Doba District, West Hararge, East Ethiopia, 2018

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ABSTRACT

Background: - Contraceptive methods reduce maternal mortality and infant mortality beside to realize couples desire of number of children to have. Ethiopia is one of sub-Saharan countries having low modern contraceptive utilization. However, the prevalence varies from region to region and from place to place.

Objective: - To determine the current prevalence of modern contraceptive utilization and associated factors among married women of reproductive age group in Doba district from Feb 08 - 28, 2018.

Method: - Community based cross sectional study design was applied in Doba district west hararghe zone. Using systematic random sampling technique, a total of 587currently married women of reproductive age group (15-49 years) were selected and interviewed. Data was collected by face to face interview using structured questionnaire. The collected data was cleaned, coded and entered and analyzed using Epi-Data version 3.02 and SPSS version 20.0 statistical program. Bivariate and multivariate logistic rigration was used to analyze the result.

Result: - Above half, 56.2% (95% CI: 52.3, 59.8) of married women were currently using modern contraceptive. The age groups of 35-49 years [AOR=0.38(0.18, 0.79)], having at least five alive children [AOR=2.39(1.31, 4.36)], women having TV/Radio in their home [AOR=3.35(2.13, 5.26)], and desire to have child in future [AOR=0.11(0.03, 0.35)], ever discussed with husband about modern contraceptive use [AOR=1.82(1.03, 3.20)] and having knowledge about modern contraceptive [AOR=1.62(1.01, 2.66)] were significantly associated with modern contraceptives use.

Conclusion: - Utilization of modern contraceptive was found that higher than the region and country level. Partner communication, women decision jointly with partner, having media access like radio and older women age are factors that affect positively to utilize modern contraceptive. More emphasis should need to increase woman participation on decision making and partner communication.

Key Words: Contraceptive utilization, married women, associated factors.

1.1. INTRODUCTION

Family planning prevents unwanted pregnancies and recourse in preventing abortions. Both short and long inter-pregnancy interval is associated with adverse pregnancy outcomes such as preterm birth, low birth weight, small for gestational age and perinatal death (WHO, 2011). Contraceptive use helps couples and individuals realize their basic right to decide freely and responsibly if, when and how many children to have. The growing use of contraceptive methods has resulted in not only improvements in health-related outcomes such as reduced maternal mortality and infant mortality (Ahmed et al., 2012, Bhutta et al., 2014 and Rutstein and Winter, 2015), LBW and preterm (UN, 2015 and Royal College, 2015) also for girls and women it can help for improvements in schooling and economic outcomes (Canning and Schultz, 2012; Schultz and Joshi, 2013, and UN, 2015). In developing country there are about 1.6 billion women of reproductive age group in 2017 and though 885 million women want to avoid pregnancy only 671 million of them are using modern contraceptives (GETTMACHER, 2017).

Large gaps remain in the proportion of total demand for family planning satisfied with modern methods in countries where overall contraceptive use is low or where many couples rely on traditional methods of contraception (UN, 2015).

Ethiopia has seen a dramatic increase in CPR over the last decade, from a low of 8.2 % in 2000 to 14.7 % in 2005 and 28.6 % in 2011, an average increase of 2 % per year. This is too far from the plans of FMOH to reach a CPR of 73.3 % by 2020. In the projected FP 2020 CPR scenario, TFR would be expected to be 1.56 in 2020 (Gizachew Asefa and Zelalem Birhanu., 2014).

In Ethiopia some study indicates that the prevalence of unintended pregnancy was as reach about 32% out of 7905 women who participate in the study and women aged 35-49 years had the highest prevalence of unintended child birth accounting about 37% and followed by women aged with 15–19 at 34% (Yibeltal et al,. 2014) and similarly other study conducted in Genji Woreda indicate that 36.5% of pregnancy was unintended. Most of unintended pregnancy was happened secondary to not using contraceptive because of fear of side effect,

lake of knowledge and methods (Fetene et al., 2014).

To reduce unintended pregnancies and to help individuals to achieve the family size they went, the strategies out lined are to create acceptance and demand for FP. Ethiopia has planned to reach the contraceptive utilization prevalence of 73.3% and to make the total fertility rate 1.5 by 2020. However, currently the prevalence of modern contraceptive utilization is only 35% and total fertility rate of 4.6 which is too far from the target sated to reach (CSA, 2016).

Some researcher stets that as the CPR of the country increases the TFR inversely become decrease (Sameh E et al., 2014). Although the contraceptive prevalence has progress still it is low and in such area infant mortality and maternal mortality is high. Ethiopia is one of country with high infant mortality having 48 infant deaths per 1000 live birth (CSA, 2016). Ethiopia is one of developing countries with low modern contraceptive prevalence (35%) and high fertility rate (4.6) (CSA, 2016).

Oromia region is one of region having low modern contraceptive coverage 28.1% which is lower than the country level but better than the two mainly pastoralist regions, that are Afar and Somali with 11.6% and 1.4% respectively (CSA, 2016). Although there were a number of researches was done concerning utilization of modern contraceptive among married women, there was a difference between region to region and place to place even within one region.

This study will help the Zonal and district health office and local NGOs to see the gap on contraceptive utilization, to give more attention about the situation, to plan and implement an intervention that increases public awareness toward utilization of contraceptives.

Contraceptive utilization in Shire Endaslasie among reproductive age group was 80.1% in 2011(Weyzer et al., 2014), in Northern part of Ethiopia in Tigray region was 41.0% (Areya et al. 2017), in Assosa district it was 64.6% (Muluwas et al., 2015), it was 65.2% in Merawi north west Ethiopia (Brhanie and Asires, 2016) in Nekemte 71.9% (Tesfalidet et al., 2015), 73.9% in Holeta according to the study conducted in 2016 (Girma T et al., 2016) and in SNNP region in 2015 it was 53.3% (Misganu et al,. 2017) which is better than the country level. The study done in rural area of Dembia district northwest Ethiopia in 2015 reviled that only 31.7% of

women of reproductive age were currently using modern contraceptive (Shibihon et al., 2017).

Previous studies conducted elsewhere on factors associated with contraceptive utilization shows that: Woman's level of education, educational status of husbands, access radio/Tv in their home, Place of residence, partner communication, number of parity the women have, Knowledge and attitude of women have toward contraceptives, Women who went to limit the number of children they have and availability of health facility that provide contraceptive service in the nearest. This study will help the Zonal and district health office and local NGOs to see the gap on contraceptive utilization, to plan and implement an intervention that increases public awareness toward utilization of contraceptives. It will also provide a base line data and information for researchers who are interested to carry out further studies.

METHODS AND MATERIALS

Study Area and period

The study was conducted in Doba district, West Hararge Zone, Oromia, Ethiopia from Feb 08 - 28 2018. The district has two urban and forty rural administrative kebeles. The total population of district is 174,813. Totally there are an expected 38686 women of reproductive age group and off them 32568 women are considered to be non-pregnant.

Study Design and Sampling technique

A community based cross-sectional study design was used The sample size for factor associated with contraceptive utilization is calculated by considering different factors - associated with outcome variable with the following assumption 95% confidence level, 5% marginal error, power 80%, and Design effect for cluster surveys, DEFF of 1.5, was used as a multiplier to increase the sample size. After considering 10 % non-responses and refusals, the total sample size required for the study was 604 of married women of reproductive age group systematic random sampling technique was applied to select the sample. In Doba district there were a total of 42 kebeles and two of them were town. These total kebeles were stratified into two urban and forty rural. Again the forty rural kebele were stratified in to two based on the time it take to reach the nearest health center. There were twelve kebele that take more than one hour to reach the health

center and the remaining twenty eight kebele take less than one hour to reach health center. Using simple random sampling technique one kebele from urban, three kebele from twelve and five kebeles from twenty eight kebele (a total of nine kebele) were selected. The number of participant was allocated proportionally to each selected kebeles. Using systematic random sampling technique the required sample size was taken every K^{th} from each selected kebeles.

From each of the selected households married woman aged 15-49 were interviewed. When there were more than one married woman in the specified age group in one household, one of them was selected using lottery method. Since the health extension worker uses community health information system (CHIS), the house number registration was taken from the health extension worker to get sample frame. When there was no woman who fit the criteria the next HH was interviewed.

Data collection tools and data collection method

Data were collected by face to face interview using structured questionnaire. The questionnaire was adapted and modified by reviewing literatures. It was prepared in English language and translated to Afan Oromo and again translated to English to check its consistency. Data were collected within three weeks duration by six trained Nurses (diploma) and two supervisors (Health officer or Nurse) from district health office were selected to supervise and monitor the data quality. A two days training was given for data collector and supervisors on procedure, technique and ways of expressing the questionnaire to collect information

Data processing and analysis

After the data was exported from Epidata to SPSS software, then descriptive statistics was performed, taking P-value of less than 0.05 as statistically significant. Bivariable and multivariable logistic regression analysis was used in order to calculate crud odd ratio (COR) and Adjusted Odds Ratio (AOR) with 95% CI; the strength of the association was evaluated.

The Hosmer-Lemeshow goodness-of fit model test was used to assess the fitness of the model. To verify the variables associated with contraceptive utilization, variables that show a P. value < 0.25 in the bivariate analyses were re-entered into multivariable logistic regression models to control for

potential confounders. A p value < 0.05 was considered statistically significant. Adjusted Odds Ratios and their 95 % Confidence Intervals are reported.

. Ethical Considerations

Ethical clearance was obtained from Haramaya University Institutional Research and Ethical Review Committee (IRERC), of Harar Campus College of Health and Medical Sciences. The permission letter which was obtained from school of graduate study was submitted to Zonal health office and the Zone health office had written a letter of cooperation to Doba district health office. Then to each selected kebele the letter of cooperation was written by the district health office. After the kebele administration had allowed the date collection was conducted.

The study subjects were informed clearly about the aim of the study and voluntary, written and signed consent was obtained. Illiterate mothers were connected by their finger print after verbal consent. The name of study subjects was not included in the questionnaires which would address concern of the study subject to ensure confidentiality. After data collection, health information was given on the benefit of using contraception and those who have willing to use were linked to where the service is provided.

RESULT

Sociodemographic characteristics of study participants

A total of 587 currently married women of reproductive age had participated in the study with 97.2% of response rate. The age groups of 25 to 34 were the dominant age group accounting 50.3%. The mean age of respondent was (28.9±6.9) and 496 (84.5%) of them lived in rural. The majority (524, (89.3%) of participants were Oromo's ethnic group and 497 (84.7%) were Muslim religion follower. The majority; 257(43.8%) of respondents educational status were primary and 239 (40.7%) of the participant were not able to read and write. The majority of the participants, 497 (84.7%) were farmers and 412, (70.2%) of them had media access (radio/tv) (Table: 2).

Table: 2. Socio-demographic characteristics of participants in Doba district of West Hararghe Zone, Eastern Ethiopia 2018.

Characteristics		Frequency (no)	Percentage (%)
Age of	15 – 24	168	28.6

respondents	25 – 34	295	50.3
	35 – 49	124	21.1
Address	Urban	83	14.1
	Rural	504	85.9
Religion	Orthodox	73	12.4
	Muslim	497	84.7
	Protestant	7	1.2
	Catholic	10	1.7
Ethnicity	Oromo	524	89.3
	Amhara	58	9.9
	Other	5	0.8
Women Educational status	Not read and write	239	40.7
	Primary	257	43.8
	Secondary	71	12.1
	More than Secondary	20	2.4
husband Educational status	Not read and write	193	32.9
	Primary	253	43.1
	Secondary	104	17.7
	More than Secondary	37	6.3
Occupation of Women	Farmer	497	84.7
	Government employee	33	5.6
	Other	57	9.7
Access to media(radio/ TV)	Yes	412	70.2
	No	175	29.8

Reproductive health characteristics

This study reviled that majority 325 (55.4%) of participant gave birth at their age of eighteen and below. The majority of women 439(74.8%) have parity of five and below. One hundred eighty (30.7%) of participants had planned to give birth within two years (Table: 3).

Table: 3. Reproductive characteristics of married women of reproductive age group in Doba district, Western Ethiopia, 2018

Characteristics		Frequency (No)	Percentage (%)
Number of birth	>5	148	25.2
	≤5	439	74.8
Number of alive child	≥5	211	36
	<5	376	64
Desire to give birth	Yes	180	30.7
	No	407	69.3

Client related characteristics

Regarding communication with husband, the majority, 419(71.4%) of women who participated in this study had ever communicate with their husband on contraceptive utilization and 43% of participant were decide jointly with their husband and about 42% of the participants decided by themselves to use contraceptive (Table 4).

Table: 4. Client related characteristics in Doba district 2018

Characteristics		Frequency (No)	Percentage (%)
partner communication	Yes	419	71.4
	No	168	28.6
Decision making	Women	246	42
	Husband	87	15
	Both	254	43
Knowledge about MC	Yes	427	72.7
	No	160	27.3
Attitude	Good	130	22
	Poor	457	78

Health service related

Most of (63.7%) participant can walk to the nearest health facility (HC) in less than one hour (Figure: 3) and most (57.8%) of them were currently using contraceptive.

4.1.3. Type of contraceptive method women use

The main method that a woman uses was the injectable type accounting 75.5% and followed by inplalon with 23.3%. Intra uterine contraceptive device (IUCD) was the least method accounting only 0.3% (Figure: 4).

Figure: 4. Type of method women used in Doba district, Oromia region, Ethiopia, 2018

Reasons not to use contraceptive methods

The main reason of women for not to use MC were desire to have birth accounting 18% of all reason. The remaining reason expressed by them were 9% not decide to use, 8% fear of side effect, 6% spouse disapproved, 2% method not accessible / far to reach and 1.0% culture or religion related (Figure 5)**.**

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Figure: 5. Showing women reason not to use contraceptive in Doba district, Oromia region Ethiopia, 2018

Factors associated with Utilization of modern contraceptives

During bivariable analyses, Age category, parity, TV/Radio possession, Ever discussing about modern contraceptive use with husband, whom to decide on modern contraceptive use, Level of Knowledge about and Level of Attitude of women towards contraceptive use were significantly associated with modern contraceptives use (P-value <0.001); Residence area, husband/partner's education, number of alive children and desire to have a child in the future (within two years) were significantly associated with modern contraceptives use (P-value <0.01); and Women's education was significantly associated with modern contraceptives use (P-value<0.05).

In multivariable logistic rigration analysis, women in the age groups 25-34 years were 61% times less likely to use modern contraceptives compared to those in the age groups of 35-49 years [AOR=0.39,(0.18, 0.82)]. The odds of using modern contraceptive was 2.9 times higher among women having at least five alive child compared to their counterparts [AOR=2.9,(1.54, 5.48)]. The Odds of using modern contraceptive was 3.3 times significantly higher among women having

TV/Radio in their home compared to those do not have TV/Radio [AOR=3.3,(2.09, 5.29)] and not desire to have child in future [AOR=6.42(1.97, 20.87)] were significantly associated with high odds of modern contraceptives use. Having discussion with husband about modern contraceptive use [AOR=2(1.14, 3.50)] were significantly associated with higher odds of modern contraceptives use. Odds of using modern contraceptive by women of whose husband decide to were 89% less likely to use [AOR=0.11,(0.05, 0.24)] and women who decide for self were 48% [AOR= 0.52,(0.32, 0.86)] were less likely to use modern contraceptives tha their counterpart (Table 4).

Table 4: Factors associated with Utilization of modern contraceptives among married women aged 15-49 years in Doba District of West Hararghe Zone, Eastern Ethiopia 2018.

Predictors/Factors		Modern Contraceptive Use		COR(95%CI)	AOR(95%CI)
		YES (%)	NO (%)		
Age of women	15-24 years	104(61.9)	64(38.1)	0.54(0.33, 0.90)*	0.99(0.40, 2.49)
	25-34 years	133(45.1)	162(54.9)	0.27(0.17, 0.44)***	0.39(0.18, 0.82)*
	35-49 years	93(75.0)	31(25.0)	1	1
Residence	Rural	271(53.6)	235(46.4)	0.43(0.26, 0.72)**	0.58(0.31, 1.10)
	Urban	59(72.8)	22(27.2)	1	1
Women's education	Not read/write	136(56.6)	103(43.4)	0.68(0.41, 1.13)	1.9(0.88, 4.04)
	Primary	134(52.1)	123(47.9)	0.56(0.34, 0.93)*	1.2(0.64, 2.17)
	Secondary & above	60(65.9)	31(34.1)	1	1
Husbands education	Not read/write	136(56.6)	103(43.4)	0.49(0.31, 0.78)**	0.69(0.37, 1.26)
	Primary	134(52.1)	123(47.9)	0.46(0.30, 0.72)**	0.6(0.25, 1.30)
	Secondary & above	60(65.9)	31(34.1)	1	1
Exposure to media TV/Radio	Yes	275(66.7)	137(33.3)	4.38(3.00, 6.40)***	3.3(2.09, 5.20)***
	No	55(31.4)	120(69.6)	1	1
Number of Parity	>5	104(70.3)	44(29.7)	2.23(1.50, 3.32)***	1.5(0.62, 3.52)
	≤5	226(51.5)	213(48.5)	1	
Number of alive children	≥5	135(64.0)	76(36.0)	1.65(1.17, 2.33)**	2.9(1.54, 5.48)*
	<5	195(51.9)	181(48.1)	1	1
Not Desire to child (within two years)	Yes		64(35.6)	1.64(1.14, 2.35)**	6.4(1.97, 20. 87)*
	No	[illegible]	193(47.4)	1	1
Women Knowledge	Knowledgeable	279(65.3)	148(34.7)	4.03(2.73, 5.94)***	1.4(0.83, 2.31)
	Not Knowledgeable	51(31.9)	109(69.1)	1	1
Attitude for MC	Good (>3)	94(72.3)	36(27.7)	2.45(1.60, 3.74)***	1.2(0.31,2.03)
	Poor (≤3/)	236(51.6)	221(48.4)	1	1
Partner communication	Yes	272(64.9)	147(35.1)	3.51(2.41, 5.11)***	2(1.14, 3.50)*
	No	58(34.5)	110(65.5)	1	1

Who decide on modern contraceptive use	My Husband only	12(13.8)	75(86.2)	0.07(0.03, 0.12)***	0.11(0.05, 0.24)***
	Myself only	138(56.1)	108(43.9)	0.53(0.36, 0.76)**	0.52(0.32, 0.86)*
	Jointly/Both of us	180(70.9)	74(29.1)	1	1

***=P<0.001, **=P<0.01 and *=P<0.05 and AOR=Adjusted OR, CI= Confidence Interval

DISCUSSION

The prevalence of utilization of modern contraceptive in this study was 56.2% which was similar with the previous studies conducted in SNNP 53.3% (Misganu et al,. 2017). But it was greater than the study done at national and Oromia level having finding of 35% and 28% respectively (CSA, 2016), 41.0% in Tigray region (Areya et al. 2017), 31.7% in rural area of Dembia district northwest Ethiopia (Shibihon et al., 2017). The possible reason might be the presence of health posts that provide both long and short method of modern contraceptive in all kebeles of Doba district with active involvement of health extension worker on provision of FP education and service might have increased the use of contraceptive methods. However, it was too far from the plan of FMOH sated to achieve by 2020 (Gizachew A and Zelalem B., 2014).

According to the findings, older women (35 - 49) tend to use modern contraceptives compared to the remaining age group. This finding was unlikely proportional with the study conducted in rural of Dembia district (Shibihon et al., 2017). This might be because of the number of alive child that women have, women participation to decide and older women might already fulfilled their desired number of children are more likely to use contraceptive (Mohammed Shahidul and Mahedi Hasan, 2016). However, according to the study conducted in Ghana indicate that the association between age and usage of family planning services were not statistically significant (Paschal, A & Matthew A, 2015).

This study indicates that utilization of modern contraceptive was higher among women who have an access to media like TV/Radio. This value were proportional with the same study done in Misha district 3.43 times (Hamdalla T et al., 2017) and Nekemte town 1.93 times (Tesfalidet et al., 2015) and also similarly with the study conducted in Bangladesh 1.16 times (1.16

times) (Iqramul Het al,.2017). Having media exposure might help to increase women's awareness positively toward contraceptive and enhance them to utilize it (Mohammed Shahidul and Mahedi Hasan, 2016).

The number of child that the women have can influence contraceptive utilization of women. This study reveals that women who have five and above alive children were 2.90 times more likely to use modern contraceptive than their counterpart. This was similar with the study conducted in Tigray region indicates that women having children of 6-7 had highly associated with use of modern contraceptive 5.66 times (Weyzer et al., 2015). This may be because of women who have more children might already fulfill their desired number of children.

This study shows that desiring for next child with in two years had better contraceptive utilization. Women who do not desire to have a child within two years were 6.42 times more likely to use contraceptive than their counterpart. This is similar with the study done in North Shoa (Mohammed et al., 2014) and Nekemte (Tesfalidet et al., 2015). It was obvious that women who desire children were not ready to use contraceptives. The parity that the women have might determine the contraceptive utilization and/ or to prevent unplanned pregnancy. The higher the parity of women the more likely they are to use contraceptive than with lower parity (Apanga, 2015).

This study shows that women who discuss with her partner concerning modern contraceptive were use two times more likely to use modern contraceptive than their counterpart. This finding was near similar with the study finding in Tigray region (Araya et al. 2017), in Dembia district (Shibihon et al., 2017), in Misha district (Hamdalla et al., 2017) and in Nekemte (Tesfalidet et al., 2015). Discussion between partners concerning contraceptive might help the women to convince her husband and to reach on jointly decision to utilize contraceptive.

Women who decide their husband to use or not use any type of modern contraceptive were 0.11 times less likely to use modern contraceptive and women that decide by them self were 0.52 times less likely to use than women who decide jointly with their partner. This was similar with the study conducted in Nekemte town (Tesfalidet et al., 2015). Women who were empowered to

decide jointly with their husband concerning her reproductive and other issue were tend to increase modern contraceptive utilization (PRB,2013).

The study might have suffered social desirability bias. This is because respondents might have falsely indicated that they use contraceptives thinking such an answer would have pleased the researcher. However, these shortfalls were minimized by providing adequate information on the importance of the study and reassurance on confidentiality.

CONCLUSION

The prevalence of modern contraceptive utilization is higher in the study area. The old women and women having five and more children were better to utilize contraceptive. Partner communication, (those women who decide jointly with their husband on using modern contraceptive) women decision making jointly with husband to use contraceptive and having access for media increases women's contraceptive utilization. The injectable method was most method used by the women.

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Conflict interests

We have no competing interest

Authors' contributions

Gezahegn M, was involved in proposal writing, designed the study and participated in coordination, supervision and the overall implementation of the project, analyzed the data and finalized. Lemessa O and Melake D conceived the study and participated in all stages of the study and revision of the manuscript and checked the statistical

analyses. All authors read and approved the final manuscript**.**

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