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Factors Associated with Modern Contraceptive Service Utilization among Married Reproductive Age Women in Melo Koza Woreda, Southern Ethiopia

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Abstract

Background: High fertility is closely associated with maternal, infant and child mortality and morbidity. Resources, environment, economy, food security, etc of a nation may also suffer from high fertility. It is estimated that every year, about 25,000 mothers die and 400,000 more suffer long-term disabilities due to complications during pregnancy, delivery or postpartum period. On the other hand, low utilization of contraception is evident in most developing countries. Rapid population size increase and low contraceptive use is observed in the study area which is located in the Gamo Gofa Zone, Southern Ethiopia. The aim of this study is to identify determinants of modern contraceptive use among reproductive age married women in Melo Koza Woreda.

Methods: Community based un-matched case-control study was conducted from December 23 to 30, 2013 in Melo Koza Woreda. Seven Kebeles were randomly selected from 37 Kebeles in the Woreda and survey of reproductive age women to identify total no of users and non-users was carried out. Then the required cases and controls were selected by systematic random sampling method from each kebele according to population proportion to size (PPS). A total of three hundred and thirty three users (cases) and, two hundred and twenty seven non-users (controls) were interviewed. Data analysis was done using logistic regression.

Results: Being older age, being educational level of secondary and above, fewer possession of cattle, being aged 18 years and above at first marriage, absence of died children, having six or more children, desiring less than six children, considering modern contraceptive as unwanted pregnancy preventer, supported by their husband to use contraceptive and inter-spousal communication about family planning were significantly associated with increased modern contraceptive service utilization in this study.

Conclusion: As being determinants of MC use, attention should be given to activities which promote formal education and children mortality reduction. It is also better to enhance inter-spousal communication about all reproductive issues through IEC using health institutions especially health extension workers.

Keywords: Family planning; Utilization; Case Control study

Introduction

Rapid population growth has significant effect on economy, environment, maternal health, infant and child health, etc. Therefore, it is one of the concerns of the planet, earth. Long years ago, Malthus projected population growth rate and stated that if the population continue to grow by this rate in future, the earth may not have enough space to stand on. Meanwhile people had tried to practice traditional birth control methods. However, those methods were not effective as desired. Later, the introduction of modern contraceptive has solved Malthusian's threat. Therefore, developed countries no more worry about high fertility. Nevertheless, developing countries such as Middle East, south Asia and Africa are being in challenge of high fertility. Furthermore, fertility and future projected population growth are much higher in sub-Saharan Africa than in any other region of the world [1-3]. High fertility is closely associated with maternal mortality and morbidity. Every year, about 25,000 mothers die and 400,000 more suffer long-term disabilities due to complications during pregnancy, delivery or postpartum period [4] Globally, modern contraceptive service utilization has been increasing though not evenly by different regions of the world .It is well practiced by developed countries .However, low utilization of contraception is evident in most developing countries especially sub Saharan Africa countries recording the lowest level of contraceptive prevalence rate (CPR) in the world. Surprisingly, Knowledge about modern contraception is relatively high

when compared with utilization rate .For instance, knowledge about MC was around 85 % in Tanzania, 96 % in Kenya and 81 % in Ethiopia, but their CPR was far below 20 % [5-7].

Ethiopia, one of the populous nations in Africa, has a total population of more than 80 million with annual population growth rate of 2.6% [8]. According to Ethiopian demographic and health survey (2011), total fertility rate (TFR) was 4.8 which is substantially higher among rural women than among urban women where rural women give birth to nearly three more children during their reproductive years than urban women (5.5 and 2.6, respectively) [9]. As Ethiopian Demographic and Health Survey, 2011, shows that CPR of modern contraceptive use is about 27 % [10]. For such populous country, this prevalence is still very

low. Furthermore, this is mainly urban contribution and it is very low among rural. Also there is regional variation. Addis Ababa, Dire Dawa, Tigray and Amhara contributed more. In case of SNNPR, annual population growth rate is slightly higher (2.9%) than national one (2.7%) [11,12]. Total fertility rate for the region is 4.9, infant mortality rate is 85 per 1000 live births, less than 5 mortality rate is 145 per 1000 live births. MM Ratio in the 5region is 673/100,000. The child mortality rate is 50 deaths per 1,000 live births, with a crude birthrate of 35.7 births per 1,000 populations and a crude death rate of 13.2 deaths per year per 1,000 populations. However, the CPR of the region is 25.8% and unmet need for family planning is 25% [13-15]. Melo Koza Woreda is one of rural woredas in SNNPR found in Gamo Gofa Zone. This woreda has been challenged by high population density and according to 2007 census its total population is120, 398. Recent report from orbs international zithromax distribution record shows its population reached 148,597 meaning grows by faster annual growth rate than regional state 2.9%. Also food shortage is recorded in the area [16, 17]. Studies show that there are many factors which affect modern contraceptive utilization either positively or negatively. Women and their partner educational status, knowledge and attitude, culture and religion, availability of methods, qualities of care and sex preference are known to affect modern contraceptive service utilization. Some studies conducted in Ethiopia are inconsistent regarding the effect of inter spousal communication on modern contraceptive service utilization [18-21].

The main reason of this research is to answer the question 'what factors make some women to use modern contraceptive service and others not?' Even though factors mentioned above are labeled as determinants, there is insufficiency of literatures to evaluate the consistency in developing countries especially in Ethiopia. Furthermore, study in Bangladesh indicated that couples who discussed family size matters were about two times more likely to be current users of contraceptive than those who didn't discuss family size. However, studies conducted in 1996 in Addis Ababa and 2000 in Gondar showed that there is no significant impact of inter spousal communication. In addition to this, the study area is remote rural woreda where no health related study conducted before at all. Therefore, the result of this study is expected to be a input for policy makers and act as baseline data for researchers.

Study Objective

To identify factors associated with modern contraceptive service utilization among married reproductive age women in Melo Koza Woreda, Southern Ethiopia, 2013.

Methods

Study Area

This study was conducted in Melokoza, one of the woredas in the Southern Nations, Nationalities and People's Region of Ethiopia. It is Part of the Gamo Gofa Zone and bordered on the south by Basketo Special Woreda, on the southwest by the Debub (South) Omo Zone, on the north by Dawro zone, on the northwest by the Konta Special Woreda, and on the east by Demba Gofa and Geze Gofa Woredas. Omo River defines its northwestern boundary separating the woreda from Konta and the Dawro Zone. It has total population of 142,926 of which 70,034 are males and 72,892 are females. The main town of the Woreda is Laha which is located at 347km from Arba Minch (zonal city), 396km from Awasa and 661km from Addis Ababa. There are 37 kebeles, 5 health centers and 37 health posts in the Woreda.

Study Design

Community based unmatched Case-control study was conducted from December 23 to 30, 2013. The Cases were married women between 15-49 years of age who were regularly using modern contraceptives for at least 6 months prior to the start of data collection and controls (non-users) were married women between 15-49 years of age who are not using modern contraceptives at least for 6 months prior to the start of data collection.

Study Population

The target population was married women of reproductive age group (15-49years). The study population was reproductive age married women in the selected kebeles and study participants were married women of the reproductive age group who were users and nonusers of modern contraceptives who meet the inclusion criteria.

Inclusion and exclusion criteria

Married women who were in the reproductive age group and, who were being regularly (without being drop outs) using FP services at least for six months prior to the time of data collection in one of the selected Kebeles were included. Also married women who were in the reproductive age group and were not being using FP services for at least six months prior to the time of data collection were included. Pregnant and Married reproductive age women who were critically ill during data collection were excluded.

Sample Size

The sample size was calculated using the formula for two populations in case-control study design.

$$n_1 = \frac{\left[Z_{\alpha/2}\sqrt{(1+1/r)\,p(1-p)} + Z_\beta\sqrt{(p_1(1-p_1)+p_2(1-p_2))/r} \right]^2}{(P_1-P_2)^2}$$

Where, $Z_{\alpha/2}$ is the level of significance = 0.05

Z_β is the power of the test = 80%

r is the control to case ratio = 1:1

p is the proportion of exposure among non-users (controls) = 0.31
p_2 is the proportion of exposure among users (cases) = o.47

p is the population proportion = $p_1+p_{2/1}+r$ = 0.39

n_1 is sample size in group 1 and n_2 is sample size in group 2

Sample size calculation was done for the following predictors; women's educational status, number of living children and inters spousal communication. Women's educational status was taken for its larger sample size. According to studies in Ethiopia, the average proportion of women exposed to formal education for nonusers is 20-34% average 27% and for users 34-51% average 42.52%. It gives 159 cases and 159 controls resulting in 318 samples. Finally by considering design effect 2 and non-response rate 10%, it gives total sample size = 668 sample (334cases and 334controls). Epi-Info version 3.5.4 was used for the calculation (Table 1).

Sampling Procedure

There were 37 kebeles in the woreda and from these 7 kebeles (37*20%) were randomly selected (by simple random lottery method). Then survey (census) was carried out in these selected Kebeles to identify users and non-users of modern contraception reproductive age married women who met the inclusion criteria. During census, an identification number which includes the Kebele code and serial

Main factors	CI	Power	Ratio	% of exposed control	OR	Cases	Controls	Total
Inter-spousal communication [31,40]	95%	80	1:1	31%	2	151	151	302
Number of living children[28,29]	95%	80	1:1	36%	2	145	145	290
Women's educational status[31,32,39]	95%	80	1:1	27%	2	159	159	318

Table1: Assumptions for sample size calculation.

S.no	Kebele	Designation	Eligible by inclusion criteria	Sample(cases) needed by PPS	Sampling interval	Starting point of selection
1	Gaysa	A1	440	67	6	6th
2	Tsilla	B1	167	61	2	1st
3	Shama	C1	182	35	5	2nd
4	Shucha Kesa	D1	60	18	3	3rd
5	Meyzelo	E1	522	70	7	4th
6	Tafa	F1	163	28	5	5th
7	Mashira	G1	430	55	7	3rd
	Total	-	1964	334	-	-

Table 2: Sampling procedure for cases.

S.no	Kebele	Designation	Eligible by inclusion criteria	Sample(controls) needed by PPS	Sampling interval	Starting point of selection
1	Gaysa	A2	328	67	4	1st
2	Tsilla	B2	521	61	8	5th
3	Shama	C2	218	35	6	1st
4	Shucha Kesa	D2	139	18	7	3rd
5	Meyzelo	E2	282	70	4	4th
6	Tafa	F2	157	28	5	2nd
7	Mashira	G2	190	55	3	3rd
	Total	-	1834	334	-	-

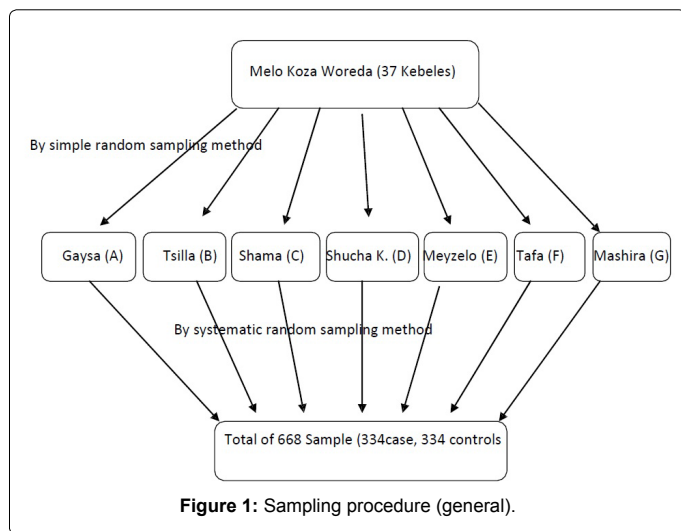**Table 3:** Sampling procedure for controls.

Figure 1: Sampling procedure (general).

number was given for each participating household (study population). After sampling frame and PPS allocation done for each selected Kebele, sampling interval will be set for each kebele accordingly. Finally users (cases) and non-users (controls) of modern contraceptive who meet the inclusion criteria were selected by systematic random sampling method (regular interval) which was set for each kebele independently both for cases and controls (Figure 1) (Table 2 & 3).

Data collection procedures

The source of data was direct interview. The questioner was prepared first in English then translated and administered in Gofigna (the local language) for data collection. Language expert in Gofigna had translated the instrument. To check whether the translation is consistent with the English meanings the instrument was translated from Gofigna back to English by other language expert. Structured questionnaire was administered by interviewer employed to collect data. Four female and three male grade 10 to12 interviewers were recruited as interviewers and two male nurses aged 27 and 28 with work experience of 6 and 7 years were supervisors. All of them were fluent speakers of local language.

For census and data collection the same persons mentioned above were used. The census was carried out from December 16 to 20 for five days and data collection was conducted from December 23 to 30, 2013. Data collectors and the supervisors were trained from December 11 to 13 for three days. The training was on how to conduct census/survey, data collection and on ethical issues. It mainly focused on questions included in the questionnaire, on interviewing techniques, purpose of the study, and importance of privacy, discipline and approach to the interviewees and confidentiality of the respondents. Before conducting the main study, pretest was carried out on December 20 on 14 users and 14 non-users from individuals who were not included in the main study from the Kebeles not included in the main study. Based on the result, reorientation was given to the data collectors and minor modification was done on the questioner. The questionnaire was reviewed and checked for completeness, accuracy and consistency by the and corrective discussion was undertaken with all the research team members. Remarks were given during morning times on how to eliminate or minimize errors and take corrective actions timely.

Operational Definition

- Modern contraceptive (MCs) method =Modern contraceptive methods which include oral Contraceptive pills, injectables, condoms, implants IUDS diaphragm vaginal foam and, male and female sterilization.

- Family Planning (FP) = having the number of children you want when you want them.

- Modern contraceptive user= A woman using any one of the modern methods for the last six months.

- Modern contraceptive non- user = a woman who is not using any of the contraceptive methods for the last six months.

Data management and analysis

After all the necessary data collected, the data was coded on pre-arranged coding sheet. Data entry and cleaning was done using EPI-info version 6 statistical package. Data was checked by double entry. Data was edited, coded, entered and cleaned using EPI-info version 6 statistical package. Then exported and analyzed using SPSS version 20 software. Frequency distribution was done to check for outliers, consistencies and to identify missing values. Descriptive analysis such as median was computed. Bivariate analysis was performed to identify the association of dependent and independent variables. Odds ratio was computed to see the strength of association between socio-demographic, reproductive, psycho-social and other variables and MC Service utilization. To identify independent predictors, first a bivariate logistic regression was performed (at p<0.2) for each independents and outcome of interest (MC Service utilization). Finally, multivariable logistic regression model was done to determine independent predictors of MC Service utilization where variables (p<0.2) were included in the model.

Ethical consideration

Before the study was conducted ethical clearance was obtained from Ethical review committee of Addis continental institute of public health. Permission letter was also taken from Gamo Gofa Zone Health Department on December 3, 2013. Written consent was also taken from Melo Koza Woreda Health Office and local authorities. Additionally, an informed verbal consent was received from each study subject. The data collectors have introduced the topic of the study, themselves and the aim of the study. They also asked the participant whether to participate or not and anyone who was not willing to take part in the study had the full right to do so. Only voluntary participants participated in the study and the participants could stop the interview at any time without any penalty. To ensure confidentially of respondents, their names will not be indicated on the questionnaire. All interviews were made individually to keep privacy.

Results

Background Characteristics of the respondents From 334 cases and 334 controls recruited, 333 cases and 327 controls were answered for the questionnaire resulting in a response rate of 98.8%. A total of 660 women of reproductive age group (15-49 years) married women in the selected Kebeles were interviewed; and analysis was made on data gathered from these 333 modern contraceptive users (cases) and 327 non-users (controls). The median age of the respondents is 29.09 yrs. for cases and 30.00 yrs. for controls (Table 4 & 5).

Bivariate analysis and Multivariate analysis

On bivariate analysis the factors that showed significant association

Characteristics	Cases[=333] Number	Percentage	Controls[=327] Number%	Percentage
Respondent's age in years:				
15-19	13	3.90%	18	5.50%
20-24	51	15.30%	34	10.40%
25-29	124	37.20%	93	28.40%
30-34	49	14.70%	59	18.10%
35-40	57	17.10%	68	20.80%
40-44	22	6.60%	32	9.80%
45-49	17	5.10%	23	7.00%
Residence of respondent				
Urban	46	13.80%	43	13.10%
Rural	287	86.20%	284	86.90%
Religion:				
Protestant	181	54.40%	178	54.40%
Orthodox	140	42.00%	136	41.60%
Others	12	3.60%	13	4.00%
Educational status of respondent:				
Not educated	205	61.60%	234	76.60%
Primary school Secondary	91	27.30%	77	23.50%
and above	37	11.10%	16	4.90%
Educational status of husband:				
Not educated	161	48.30%	193	59.10%
Primary school	101	30.30%	110	33.60%
Secondary school and above	71	21.40%	24	7.30%
Respondent's main occupation:				
Housewife	282	84.70%	299	91.40%
Government employee	19	5.70%	8	2.40%
student	27	8.10%	14	4.40%
Others	5	1.50%	6	1.80%
Partner's main occupation:				
Farmer	255	76.60%	271	82.90%
Government employee	29	8.70%	9	2.90%
student	39	11.70%	40	12.20%
Others	10	3.00%	7	2.00%
Number of cattle the family own:				
None	88	26.50%	64	19.60%
One	78	23.40%	76	23.20%
Two	79	23.70%	71	21.70%
Three	53	15.90%	61	18.70%
Four and above	35	10.50%	55	16.80%
Possession of Radio:				
Yes	51	15.30%	48	14.70%
No	282	84.70%	279	85.30%

Table 4: Background characteristics of MC use among reproductive age married woman in Melo Koza Woreda December 23 to 30, 2013.

with modern contraceptive service utilization were: educational status of woman, educational status of husband, occupation of the woman, occupation of husband, number of cattle the family own ,age of first marriage, ever pregnant, number of pregnancy, number of living children, presence of died children, desired number of children, considering MC as unwanted pregnancy preventer, cultural acceptance, husband approval, husband support and discussion about FP with husband.

In order to control the effect of confounding factors and see

Characteristics	Cases[=333] Number	Percentage	Controls[=327] Number%	Percentage
Respondents age at first marriage:				
<18	133	39.90%	177	54.10%
18+	200	60.10%	150	45.90%
Ever been Pregnant before:				
Yes	315	94.40%	313	95.70%
No	18	5.60%	14	4.30%
Number of pregnancies:				
Less than 6	237	71.20%	206	63.00%
6and above	96	28.80%	121	37.00%
Number of living children:				
Less than 6	93	27.90%	125	38.20%
6 and above	240	72.10%	202	61.80%
Sex composition of living children:				
Greater number of males	156	46.60%	157	48.00%
Equal number	72	21.60%	74	22.60%
Greater number of females	105	31.80%	96	26.40%
Presence of died child:				
Yes	54	16.20%	89	27.20%
No	279	83.80%	238	72.80%
MC can prevent unwanted pregnancy:				
Agee	278	83.50%	215	64.80%
Disagree	55	16.50%	115	35.20%
Culturally acceptable:				
Yes	258	77.50%	193	59.00%
No	75	22.50%	134	41.00%
Husband approves FP:				
Yes	238	71.50%	206	63.00%
No	95	28.50%	121	37.00%
Husband Support:				
Yes	242	72.70%	144	44.00%
No	91	27.30%	183	56.00%
Ever discus about FP with husband:				
Yes	187	56.20%	89	27.20%
No	146	43.80%	238	72.80%

Table 5: Background characteristics of MC use among reproductive age married woman in Melo Koza Woreda   December 23 to 30, 2013 continued.

the independent association of each of the factors with the outcome variable we developed a multiple logistic regression model. The model includes factors that showed significant association in the binary logistic regression, well known factors. Only variables with p-value <0.2 in bivariate analysis have undergone multivariate analysis. In this analysis, we find factors like age of respondents, educational status of husband, number of cattle the family own, age of first marriage, number of living children, presence of died children, desired number of children, considering MC as unwanted pregnancy preventer, husband support and discussion about FP with husband were the factors we found significantly associated with modern contraceptive service utilization in this study.

According to the findings, elder women tend to use modern contraceptives compared to the younger ones. For example women who are in the age group 40 to 44 are 6.6 times likely to use modern contraceptives compared to the younger ones who are between 15 to 19 years old. The odds of MC Service utilization was about 3.3 times (AOR=3.342, 95%CI: 1.662-6.724) higher for women whose husbands were educated secondary school and above than those of not educated. Regarding number of cattle the family own, woman whose family had four and above cattle were 61% less likely to use MC Service than those

of no cattle at all. Women whose age at first marriage 18 years and above were 1.8 times (AOR=1.671, 95%CI: 1.133-2.464) more likely to use modern contraceptive than those of less than 18 years. Women who had six or more living children are more 1.6 times (AOR=1.552, 95%CI: 1.048-2.299) more likely to use MC than those with less than six. Women who had no experience of died children were about 2.4times (AOR=2.429, 95%CI: 1.525-3.870) more likely to use MC than women who had died children. Women who want children less than 6 were 3 times (AOR=3.073, 95%CI: 1.947-4.852) more likely to use MC than women who desired 6 children and above. Women who consider MC use as unwanted pregnancy preventer were 3times (AOR= 2.998, 95%CI: 1.920-4.680) more likely to use MC than their counter parts. Women whose husband supports MC were 1.8 times (AOR= 1.842, 95%CI: 1.118-3.036) more likely to use MC than their counterparts. Similarly women who discuss about FP with their husband were about 2.2times (AOR=2.197, 95%CI: 1.329-3.634) more likely to use MC than women who did not (Table 6).

Discussion

This community-based case-control study which assessed the factors affecting MC is important to see the progress towards achieving the national MDGs, especially goals 1, 4, 5 and 7. According to the study, respondent's age, educational status of husband, number of cattle the family own, age of first marriage, presence of died children, desired number of children, perception of 'too many children help improve the income of the family', perception of 'Child mortality should be compensated by too much birth', husband support and inter-spousal communication about FP were significantly associated with MC Service utilization in the area. Age was categorized by demographic age grouping and showed statistically significant difference between the two study groups in all categories increasingly from lower to higher age groups. This is compatible with other findings [33].

This study did not show statistically significant difference in woman's educational status between the two study groups when adjusted even though the crude showed statistically significant difference. Studies so far revealed that educational status as one of the main predictors of MC Service utilization. However, other studies done in North Shewa and Eastern Sudan claimed that it is more detectable for whom joined higher educational level so that no statistically significant difference between lower level education and no education [22-33]. This is probably true for such rural women most of whom are either not educated or lower educational level.

Educated husbands are more open to discuss FP issues with their wives. They are also more flexible to deal with problems faced by their wives regarding reproductive health service utilization. Secondary and above educational attainment of the husband was also one of the factors significantly associated with MC Service utilization. In regard to this study, the odds of MC Service utilization was about 3.3 times higher for women whose husbands were educated secondary school and above compared to those of not educated This finding is in line with a studies conducted in [25,28,31]. Regarding the economic indicators included in the study, number of cattle the family own showed statistically significant difference between the two groups .women whose family had four and above cattle were 61% less likely to use MC service compared to those with no cattle at all. This is probably either because of the perception 'if you are wealthy, no matter you bear as many children as possible so that you have the ability to feed' in the study area or by chance alone. However, it is inconsistent with other studies so far. According to this study, women who had no experience of died

FACTORS	Cases [=333] Number	Cases [=327] Number	COR (95%CI)	AOR (95%CI)	P- value
Respondent's age in years:					
15-19	13	18	1.00	1.00	
20-24	51	34	2.077(0.901-4.787)	3.967(1.438-10.94)*	0.008
25-29	124	93	1.846(0.861-3.957)	5.968(2.296-15.51)*	0.00
30-34	49	59	1.150(0.513-2.579)	4.333(1.542-12.18)*	0.005
35-40	57	68	1.161(0.524-2.571)	5.640(1.985-16.02)*	0.001
40-44	22	32	0.952(0.388-2.333)	6.631(2.134-20.60)*	0.001
45-50	17	23	1.023(0.396-2.645)	6.541(1.946-21.99)*	0.002
Educational status of respondent:					
Not educated	205	234	1.00	1.00	
Primary school	91	77	1.349(0.944-1.927)	1.066(0.651-1.745)	0.8
Secondary and above	37	16	2.640(1.426-4.886)*	1.625(0.696-3.793)	0.262
Educational status of husband:					
Not educated	161	193	1.00	1.00	
Primary school	101	110	1.101(0.782-1.549)	0.976(0.635-1.500)	0.912
Secondary school and above	71	24	3.546(2.134-5.893)*	3.342(1.662-6.724)*	0.001
Respondent's main occupation:					
Housewife	282	299	1.00	1.00	
Government employee	19	8	2.535(1.092-5.883)*	1.447(0.338-6.196)	0.619
student	27	14	2.059(1.058-4.005)*	1.208(0.198-7.359)	0.838
Others	5	6	1.334(0.355-5.018)	0.944(0.182-4.886)	0.945
Partner's main occupation:					
Farmer	255	271	1.00	1.00	
Government employee	29	9	3.424(1.590-7.375)*	2.590(0.824-8.140)	0.103
student	39	40	1.036(0.646-1.663)	1.527(0.359-6.506)	0.567
Others	10	7	1.518(0.569-4.049)	1.298(0.383-4.398)	0.675
No. of cattle the family own:					
None	88	64	1.00	1.00	
One	78	76	0.746(0.475-1.172)	0.893(0.506-1.574)	0.695
Two	79	71	0.809(0.514-1.275)	0.742(0.420-1.310)	0.303
Three	53	61	0.632(0.387-1.030)	0. 377(0.204-0.698)*	0.002
Four and above	35	55	0.463(0.272-0.788)*	0.393(0.200-0.774)*	0.007
Respondents age at first marriage:					
<18	133	177	1.00	1.00	
18+	200	150	1.774(1.303-2.417)*	1.671(1.133-2.464)*	0.01
Presence of died child:					
Yes	54	89	1.00	1.00	
No	279	238	2.429(1.525-3.870)*	2.429(1.525-3.870)*	0.00
Number of living children:					
Less than 6	93	125	1.00	1.00	
6 and above	240	202	1.932(1.322-2.825)*	1.552(1.048-2.299)*	0.028
Desired number of children:					
01-May	134	54	1.00	3.073(1.947-4.852)*	0.00
6 and above	199	273	1.597(1.151-2.215)*	1.00	
Number of pregnancies you had:					
Less than 6	237	206	3.404(2.363-4.904)*	1.00	
6and above	96	121	1.00	1.288(0.380-4.392)	0.677
MC can prevent unwanted pregnancy:					
Agee	278	215	1.00	2.998(1.920-4.680)*	0.00
Disagree	55	115	1.450(1.046-2.010)*	1.00	
Culturally acceptable:					
Yes	258	193	2.742(1.898-3.960)*	1.497(0.963-2.326)	0.073
No	75	134	1.00	1.00	
Husband approve FP:					
Yes	238	206	2.388(1.702-3.351)*	1.327(0.350-6.806)	0.569
No	95	121	1.00	1.00	

Husband Support:					
Yes	242	144	1.472(1.06-2.04)*	1.743(1.063-2.859)*	0.028
No	91	183	1.00	1.00	
Ever discus about FP with husband :					
Yes	187	89	3.380(2.44-4.67)*	2.331(1.420-3.826)*	0.001
No	146	238	1.00	1.00	

*=statistically significant at **P value<0.05**

Table 6: Determinant factors of MC use among reproductive age married woman in Melo Koza Woreda   December 23 to 30, 2013 using multivariate analysis.

children were about 2.4 times (AOR=2.575, 95%CI: 1.608-4.123) more likely to use MC than women who had died children. When women have experience(s) of child death they attempt to replace the lost ones and want to have more children. On the other hand, if they perceived low child death in their community they might undergo contraception knowing that most of the children born would reach adulthood. This study is consistent with Studies conducted so far in Butajira district, Jima town and other places [28-31]. Similarly, women who desired fewer children were 3 times more likely to use MC Service than their counterparts and it goes in line with other studies so far. Regarding age of first marriage, women whose age at first marriage is 18 years and above were 1.8 times more likely to use modern contraceptive than those of less than 18 years. This is because women married at the age of 18 years or above are supposed to be with relatively better knowledge about their reproductive health. Regarding currently living number of children, women who had six or more living children are more 1.6 times more likely to use MC than those with less than six. This could be because women with children six and more have already fulfilled their child demand so that in need of contraception [34].

It has long been found out as paving way for MC Service utilization [28,30,33]. As revealed by this study, women who discuss about FP with their husbands are 2.3 times more likely to use MC Service than who did not. This finding goes in line with above studies. However, there are also studies which claim no difference. Furthermore, women whose husbands support MC are 1.7 times more likely to use MC than that of no support. This is compatible with other studies [28]. Women who consider MC use as unwanted pregnancy preventer were 3 times) more likely to use MC than their counter parts. This is because being informed with the purpose of modern contraceptive primary and essential part to utilize.

Strength

This study was done in the area where no reproductive health research done before. Community/population based study so that bias is minimize

Limitation

The study included only current modern contraceptive users during the study period so that previous users were not included.

Conclusion

According to the study, respondent's age, educational status of husband, age of first marriage, number of living children, considering MC as unwanted pregnancy preventer, husband support and inter-spousal communication about FP were positively associated with MC Service utilization in the area. Whereas, number of cattle the family own, presence of died children, desired number of children, perception like many children to improve the family's income and high child birth to compensate child mortality were negatively associated with MC Service utilization in the area.

Recommendation

Development policies and strategies should be reoriented to encourage the adoption of family planning services and, to alleviate the underlying condition of ill health and poverty through facilitating open decision making and communication channels between couples. Enhance Information, education and communication activities regarding family planning services using health institutions and other methods by the MOH, RHB, ZHD and the DHO especially through health extension workers for the determinants identified by this study. Also other study designs such as qualitative studies are advisable in the area to dig out contextual facts like economic determinants.

Abrevations

MC-Modern Contraceptive, FP- Family Planning, MOH- Ministry of Health, RHB- Regional Health Bureau, ZHD- Zonal Health Department, DHO- District Health Office

Conflict Of Interest

The authors declared they have no conflict of interest.

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