

DETERMINANTS OF MODERN CONTRACEPTIVE USE AMONG WOMEN OF REPRODUCTIVE AGES IN THE RURAL AWI ZONE, ETHIOPIA

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Abstract

The objective of the study is to assess the factors affecting use of modern contraceptive among married women of reproductive ages. The study applied concurrent cross-sectional design with sample of 157 married women in the reproductive age from the study area. Data was collected through survey questionnaire, focus group discussions, in-depth and key-informant interviews and analyzed. The result has shown that the status of modern contraceptive use to those who do not use decreased by 0.37 by women of age 35-39 than age of 40-44. The education status of women using the modern contraceptive methods that are illiterate and read and write compared to those who have elementary education are increased by a factor of 2.002 than those who can read and write. Hence, improving economic status of women, raising community awareness on modern contraceptive, facilitating peer and spousal discussion for the better use of modern contraceptive methods is required.

Keywords: Family planning, Determinants of family planning, Modern contraceptive, Contraceptive prevalence rate, Awi zone

INTRODUCTION

Rapid world population growth is becoming a global concern (Bekele and McCabe, 2006) and according to the United Nations (2014) report, the world population reached 7.2 billion with growth rate of 1.2 percent per annum. It is also projected that the world's population is expected to reach 8.1 billion in 2025, and 9.6 billion in 2050. More than half of the world's population is below the age of 25, and four out of five young people live in developing countries (United Nations, 2014). During the period 2014-2050, nine countries are expected to account for more than half of the world's projected increase including: the Democratic Republic of the Congo, Ethiopia, India, Indonesia, Nigeria, Pakistan, the United Republic of Tanzania, the United States of America and Uganda.

In the past 3 decades, the use of family planning methods has increased dramatically in the developing world, leading to a fall in fertility rates. Yet there are still significant levels of demand for family planning that are unmet (Tilahun, 2013). In Sub-Sahara Africa young people aged 15 to 24 have low family planning utilization rates and limited knowledge about reproductive health and services (Central Statistical Agency, 2014). About 23 percent of married women used family planning that is 18 percent with a modern method and 5 percent with a traditional method. In Western Africa, for example, more than 14 percent of women in Ghana used modern contraceptive methods, compared with less than 5 percent of women in Sierra Leone (Gribble & Haffey, 2008). With a population of 105 million and annual growth rate of 2.4% in 2017, Ethiopia is the second most populous nation in sub-Saharan Africa. The more than (44%) of the population is a young; below age 15; indicating that large proportion of population in Ethiopia is in the reproductive age. Women of reproductive age (15-49) constitute nearly 21% of the total population of Ethiopia (CSA, 2008). The population is expected to reach over 173 million in 2050 (Mengist and Yilma, 2006). Ethiopia is a predominantly rural (85 percent) and young society, with 84 percent living mainly in densely populated highland settlements (Tilahun, 2013). One of the reasons for the rapid rate of population growth is the high fertility norm, which is adhered by low contraceptive prevalence rate (CSA and ORC Macro, 2011).

In Ethiopia in 1990, only 3.9 percent of all women (4.8 percent currently married) of childbearing age were using a modern method of family planning. A report on an in-depth

analysis of the EDHS 2000-2016 revealed that significant improvement has been observed in Ethiopia in contraceptive prevalence rate (CPR) between 2000-2016 from a low of 8.2% in 2000 to 14.7% in 2005 and 28.6% in 2011 and 36 percent in 2016 (UNFPA, 2017). It had shown that 13.9 and 20.5 percentage point increments in the period 2005 to 2011 and 2000 to 2011, respectively. In Ethiopia, both knowledge and use of family planning methods have increased significantly since the inception of the population policy in 1993. However, using modern contraceptive methods has a geographical variation between urban and rural areas. For example, women living in urban areas were four times as likely as women living in the rural areas of Ethiopia to use a modern contraceptive method (EDHS, 2005). In 2000 the rural prevalence was 4.3%, and five years later it reached 10.9% and by 2011 the rate reached at 23.4%. The urban prevalence was 35.8% in 2000, and by 2011 it reached 52.5% (UNFPA, 2012) in Ethiopia. In Ethiopia, the total fertility rate in rural areas (5.5 children per woman) is higher than urban area (2.6 children per woman) by almost 3 children per woman (Lake et al., 2013). If all unmet need for modern contraceptive methods were satisfied, maternal mortality would drop by almost one-third from current levels, and unplanned births and unsafe abortions would decline by 89-92% (Sundaram et al., 2010).

Using contraceptive has significant contribution in saving mothers' lives. As estimated by Rahel (2008) that contraceptive use reduces maternal mortality and improves women's health by preventing unwanted pregnancy, high-risk pregnancies and unsafe abortions. Some contraceptives also improve women's health by reducing the risk of disease transmission, protecting against certain cancers and health problems. Contraceptive use also improves women's status and quality of life. In addition to spacing and limiting the number of children contraceptive use improves maternal and child health empowers women and enhances economic development (Wubegzier and Alemayehu, 2011). Family planning has beneficial effects in terms of sustainable socio-economic development and protection of the environment. It also helps improve the future by allowing parents to better plan their lives since poverty and lack of education limit the opportunities for individuals and families. Through family planning, individuals can obtain greater prosperity and security for the family because they can have a better chance at receiving an education and devoting more time to earning an income (Alemayehu, 2012).

To facilitate the family planning provision services, the Ethiopian government introduced different packages like expanding the Health Extension Program (HEP) which is a package of family health, disease prevention and control, personal hygiene, environmental health, health education, and family planning services provided by health extension workers (HEW) (FDRE Ministry of Health, 2006). As a component of the National Population Policy, the Ethiopian Reproductive Health Strategy identifies six priority areas: social and cultural determinants of women's reproductive health; fertility and family planning; maternal and newborn health; HIV/AIDS; reproductive health of young people; and reproductive organ cancers (FDRE Ministry of Health, 2006; Wondimu et al., 2013). But the actual contraceptive practice among women of reproductive age group remained very low. In this regard, a number of studies were conducted on determinants of modern contraceptive use among women in the reproductive ages 15 to 49 years in different parts of Ethiopia (Abdurahman et al., 2014; Alemayehu & Besufekad, 2014). However, these studies were focused on socioeconomic and demographic factors that affect modern contraceptive use among married women in the reproductive age. The above studies also indicated that there are women who are not using modern contraceptive methods in the rural areas in Ethiopia. Hence, producing information on women's decision making power on family planning use has a paramount importance for designing appropriate program. Hence, the objective of the study is to assess the practices of modern contraceptive use among married women of reproductive ages in the rural Awi Zone. Therefore, this study is conducted to address this through: (1) describing the current status of contraceptive use in rural women; (2) examining the differences in spousal agreement and her ability to use contraceptives in rural women and (3) examining the barriers to women's influence on joint decision-making to contraceptives use.

2. RESEARCH METHODS

2.1. Description of the study area

Awi Zone is located in western parts of Amhara Region, Ethiopia and it is bordered on the west by Benishangul-Gumuz Region, on the north by West Gondar Zone and on the east by West Gojjam Zone. The zone is located at a distance of 114 km from Bahir Dar, region capital and 449 km from Addis Ababa, nation capital. Based on the 2007 census conducted by Central Statistical Agency, the zone has a total population of 1,220,316, of whom 598,880 (49.1%) are men and 621,436 (50.9%) are women (CSA, 2007). The potential health service coverage by

public health facilities of the zone was 98%. A total of 215,564 households were counted in this Zone, which results in an average of 4.56 persons to a household, and 209,555 housing units. The two largest ethnic groups reported in Awi Zone were the Awi (59.82%) a subgroup of the Agaw, and the Amhara (38.44%); all other ethnic groups made up 1.74% of the population.

2.2 Data and Analysis

The study applied concurrent cross-sectional mixed research design composed of both quantitative and qualitative data. Quantitative method is used to decide the prevalence rate of modern contraceptive, types of contraceptive used by women, socioeconomic and demographic factors that affect current use of contraceptives in the study area. Qualitative data is helpful to generate detailed data that is not captured by quantitative techniques and choice of contraceptive methods. The target population of the study consists of married women in the reproductive age of 15-49 years living in the 3 randomly selected rural *kebeles* (*smaller administrative unit*) in Awi Zone. The study established earlier contact with health extension workers of randomly selected *kebeles* to obtain list of users and non-users of modern contraceptive that served as a sample frame. From these *kebeles* (Mangua, Ambera and Wondita) 157 sample respondents were drawn randomly by using (Kothari, 2004) to determine sample size for large population.

Primary data was collected through survey questionnaire, focus group discussions (FGD) and in-depth and key-informant interviews and secondary data was obtained from the review of different sources. The questionnaires were designed to collect quantitative data related to socio-economic and demographic variables determining use of modern contraceptive use. It also supports to identify types of contraceptives used by women and factors affecting the use of contraceptive in the rural *kebeles* of Awi Zone. In-depth interviews were conducted with four women who did not use modern contraceptive methods in order to dig out information on factors affecting use of modern contraceptive. Key-informant interviews were conducted with three female health extension workers of each *kebeles* to generate qualitative data on factors influencing contraceptive use among women in the reproductive ages. Focus Group Discussion (FGD) was conducted to collect qualitative data facilitated by nine women members' health extension workers.

The data collected was analyzed and summarized by descriptive and inferential statistical techniques from SPSS version 20. The Univariate, bivariate; multivariate techniques were used to analyze the existence of significance relationship between the dependent and independent variables. Variables having p-value of less than 0.05 were considered as significantly associated with the dependent variables. Logistic regression model was to predict the presence or absence of a characteristic based on values of a set of predictor variables. Logistic regression allows one to predict a discrete outcome from a set of predictor variables that may be continuous, discrete, dichotomous, or a mix of any of these. The model of the logistic regression equation used in the analysis is of the form:

$$\text{Log} [P / 1-P] = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k \dots \text{---} (1)$$

Where X_1, X_2, \dots, X_k are set of independent variables, b_0 is a constant while b 's are regression coefficients. The dependent variable, modern contraceptive use in this context could be influenced by different factors of dependent variable expressed by using modern contraceptive methods or not using modern contraceptive methods. Independent variables such as age, level of education and number of living children, are a continuous and expected to influence positively the use of modern contraceptive methods. The Knowledge about modern contraceptive and attitude to modern contraceptive are dummy variables anticipated influencing modern contraceptive use positively. But religious belief and household influences are dummy variables anticipated to influence modern contraceptive use negatively. Income of respondents and sex preference are dichotomous variables anticipated to influence modern contraceptive use negatively. The qualitative data obtained through in-depth interview, key-informant interview and FGD were coded and categorized based on their contents and similarity in themes. Descriptive method of data analysis was used to analyze the qualitative data and presented alongside with the quantitative data.

3. ETHICAL CONSIDERATIONS

Throughout the study process the researcher considered the following ethical issues. The study explained objective of the study to the respondents to get their informed consent. Respondents participated in the study willingly. The questionnaires and interview guides did not contain any degrading, discriminating or any other unacceptable language that could be offensive to any members of the sample respondents. Anonymity of respondents and

confidentiality of the data were ensured. Qualitative data was aggregated and described. In the description of qualitative data pseudonyms were used to maintain anonymity of women who participated in the interviews.

4. RESULT AND DISCUSSION

4.1. Age of respondents

The mean age of *respondent* women was 30.92 year with standard deviation of 6.179. The majority of respondents 55(35%) were found within the age range of 30-34 years and the age range of 15-19 accounted low percentages (1.91%) (Table1). This shows that the middle age group has more chance of reproducing than the other older ages. When the women get older the percentage of modern contraceptive use decreased compared to younger women. The age of women on status of modern contraceptive methods use to those who do not use decreased by 0.37 by being women of age 35-39 than age of 40-44. The age of a woman increases one unit for age group 15-19 years than for age group 20-24 years (*appendix1*). Similarly, the qualitative data generated through in-depth interviews, key informant interviews and FGD showed that some women who reached at the age of mid 40s tend to discontinue using modern contraceptive. Similar to this study result, there are empirical evidences that identify age as a factor influencing modern contraceptive use among women in the reproductive age (Gizat 2014; Nibret, 2010). UNFPA (2012) reported that in Ethiopia women age 25-34 years were 14% more likely than the adolescents age 15-24 years to use contraceptive. On the other hand older women (35-49 years) were not different than the adolescents in their odds of using contraception. This shows that age is one factor that contributes to use of modern contraceptive methods. The study also indicated that the middle reproductive ages are demanding more modern contraceptive than other ages.

Table 1: Age distribution of sample respondents

Age (in year)	Frequency	Percentage
15-19	3	1.91
20-24	20	12.74
25-29	32	20.38
30-34	55	35.03
35-39	33	21.02
40-44	8	5.1
45-49	6	3.82
Mean		30.92
Std. Deviation		6.179

4.2. Number of living children and education.

Among 157 respondents, 115 (73.2%) said that the number of living children is taken into consideration by women in the reproductive ages to decide the use of modern contraceptive methods (MCM). However, 42(26.8%) respondents did not agree with the association between number of living children and usage level of contraceptive methods (Table2). The odds ratio of women not using modern contraceptive methods compared to who use a method are decreased by a factor of 0.080 for being less number of children rather than those who had more number of children (*appendix1*). According to FGD participants on the average many parents in the rural areas want to have 4 children and they do not want to use and interrupt the modern contraceptive again. The similar study in Egypt showed that, out of those women with no living children, only 3 percent were in need of family planning while 35 percent of the women with seven or more living children were in need. For African and Asian countries, some studies have found relatively highest contraceptive use mostly among women with four or more children (Nibret, 2010). In Ethiopia the study also indicated that the number of living children had significant relation with contraceptive use (Gizat, et al., 2014). Women who experienced child death were less likely to adopt contraception compared to women who have not experienced child death. Using contraceptive increased by 36 percent among women who did not experience child death as compared to women who experienced the deaths of two or more children (UNFPA, 2012). Similarly, a study in Jimma confirmed that couples who had a history of child death were less likely to be current contraception users than couples who had

no history of child death (Amaha et al., 2006). Therefore we can conclude that number of living children had a significant effect on using modern contraceptive methods.

Education level is also another factor that affects modern contraceptive use. In this study the majority (43.9%) of the sample respondents were illiterate, (22.3%) respondents were able to read and write, (17.8 %) respondents attended elementary school (Grade 1 to 8) (15.3%) attended secondary school (Grade 9 to12), and 1 woman (0.6%) joined higher education (Table2). The odds ratio of education status of women using the modern contraceptive methods that are illiterate and read and write compared to those who have elementary education are increased by a factor of 2.002 rather than those who can read and write (*appendix1*). During the key-informant interviews health extension workers explained that in most cases women who had higher educational level had the capacity to understand and practice lessons of health education programs including MCM than non-literate women.

Consistent with this, many studies (Nibret, 2010; Simeon, 2002; UNFPA, 2011; Wubegzier et al., 2012) confirmed that the influence of contraceptive use is positively correlated with educational level. A study on contraceptive knowledge and practice in sub-Saharan African countries found out that higher socio-economic status i.e. either or both spouses' better level of education is correlated with higher contraceptive use (Simeon, 2002). Having better educational attainment has contribution in increasing women's autonomy on modern contraceptive use. Education has a significant effect on couples' contraception use (Amaha et al., 2006; Mussie et al., 2014). Hence, it is possible to deduce that educational level has an influence on the status of modern contraceptive usage among sample respondents.

Table 2: Influence of living children and education on modern contraceptive use

Questions		Frequency	Percent
The influence of living children on decision to use or not to use MCM?	No	42	26.8
	Yes	115	73.2
	Total	157	100
Pearson's Chi-square		42.722	P=< .000
Educational Level		Frequency	Percent
Illiterate		69	43.9
Read and Write		35	22.3
primary School		28	17.8
Secondary School		24	15.3
Higher Education		1	.6
Total		157	100

3.3. Knowledge of modern contraceptive

Knowledge is basic to modern contraceptive use, maternal and other reproductive health matters. Among 157 sample respondents 110(70.1%) were users of MCM; and 47(29.9%) were non-users (Table3). Among 110 respondents who used MCM the majority 64(58.7%) used Injectable (Depo-Provera), 39(35.8%) women used Norplant, and the remaining 6(5.5%) respondents used oral pills. The majority of respondents 153 (97.5%) in the research area replied that they understood the possibility of controlling birth rate while the rest 4 (2.5 %) of respondents did not know about the possibility of controlling birth rates and they believed that only *God* give permission for couples about the number of children (Table3). The majority 156 (99.4%) of respondents have adequate information about modern contraceptive methods (Table3). However, during the survey 110 (70%) respondents were using MCM, while 47 (30%) respondents were not using MCM irrespective of their knowledge. Many 101(64.3%) of the respondents got information about modern contraceptive methods from health posts and health centre through health practitioners. Respondents obtained information about MCM from teachers, neighbors, their spouse, and their friends, with list percentage 0.6, 1.9, 2.5 and 3.2 respectively. The odds ratio of women's knowledge about modern contraceptive methods has increased by a factor of 0.968 than those who haven't knowledge of contraceptive methods (*appendix1*). Many studies indicated that there is a wide gap between knowledge and use of modern contraception use. Better knowledge, fear of partner's opposition or negligence, involvement in decisions about child and economic affairs were statistically significant factors for better decision making power of women on the use of modern contraceptive methods (Binyam et al., 2011). A study in Jinka, southern Ethiopia indicated that knowledge of contraceptive and age of women has significant association with the use of long acting and permanent contraceptive methods (Getachew et al., 2014). Knowledge about modern contraception alone could not guarantee utilization of contraceptive methods (Fasil, 2006). This shows that both knowledge and other factors play role in decision of contraceptive use.

Table 3: Knowledge of modern contraceptive methods

Awareness about MCM	Response	Number of participants	Percent
Do you think that births can be controlled?	No	4	2.5
	Yes	153	97.5
Have you ever heard about MCM?	No	1	0.6
	Yes	156	99.4
Do you get information about MCM?	No	1	.6
	Yes	155	98.7
Where do you get information about MCM?	From my husband	4	2.5
	From my friend	5	3.2
	From my neighbors	3	1.9
	From health practitioners	101	64.3
	From teachers	1	.6
	From TV / radio	37	23.6
	From written documents	4	2.5
	All	155	98.7
Which of the following are MCMs that you know?	pills	19	12.1
	Norplant	25	15.9
	males condom	1	.6
	loop	12	7.6
	by injection	47	29.9
	All	51	32.5
	Total	155	98.7
Where did you get the contraceptive methods?	from health centers	152	96.8
	drug store	3	1.9
	All	155	98.7
What is the importance knowledge of the contraceptive methods?	Creating a gap in giving birth	116	73.9
	deciding birth rate	19	12.1
	preventing unwanted pregnancy	5	3.2
	family planning	13	8.3
	All	3	1.9
Which of the following are MCMs that you know?	Pills	19	12.1
	Norplant	25	15.9
	Males condom	1	.6
	loop	12	7.6
	Injection	47	29.9
	All	51	32.5
	Total	155	98.7
Which type of MCM you are using currently?	Oral pills	65	59.1
	Norplant	39	35.5
	Injectable	6	5.4

4.4. Religious beliefs and attitude

The religious background of the sample respondents had a significant effect on the rate of modern contraceptive usage. About 84(53.5%) of respondents believed that using modern contraceptive methods are absolutely forbidden by their religion while the rest 73(46.5%) of respondents replied that their religious background had no influence to use of MCM (Table4). Among 157 respondents 79(50.3%) respondents had an attitude that using modern contraceptive methods for the purpose of limiting or spacing the birth rate is a sinful act in the orthodox Christian religion. However, for 78(49.7%) respondents using MCM is not a sinful act, and they did not consider religion as determinant factor for decision making to use or not MCM (Table4). Religious influence is found to be significant factor where the odds ratio of women who believed that modern contraceptive methods are not prevented in Christian religion decreased on their status of using modern contraceptive methods by a factor of 0.482 than those who believed modern contraceptive methods are prevented in their religion(*appendix1*). In the FGD, in-depth and key informant interviews participants mentioned that, although they were few in numbers there were women in the reproductive age that did not use MCM for religious reason.

Similar study in USA showed that the association of religious affiliation with contraceptive use, and differences in the use of particular methods by religious affiliation (Daniels, Mosher & Jones, 2013). The major religions in Ethiopia, Orthodox and Muslims, do not openly approve the use of family planning, however, there is higher contraceptive use among the Orthodox Christians than any other religious groups. Compared to the Muslims, Orthodox women were found 57% more likely to use contraception. However, there was no significant difference in the likelihood of using contraception between Protestants and Muslims. Followers of other religion (other than the three predominant religions) were 22% less likely to use contraception than their Muslim counterparts (UNFPA, 2012). The survey result also revealed that 152(96.8%) respondents agreed to know about modern contraceptive methods. It was only 5(3.2%) respondents who disagreed to know about contraceptive methods. However need to know and using modern contraceptive methods have no positive association. In addition 153 (97.5%) respondents agreed to discuss about contraceptive methods, while 4(2.5%) respondents were not interested to discuss about contraceptive methods (Table4).

The odds ratio of women who haven't inclination to know about modern contraceptive methods of who don't use modern contraceptive methods is decreased by factor of 0.044 than those who have a positive inclination to know about modern contraceptive methods. The odds ratio of women who haven't needed to use modern contraceptive methods of is decreased by factor of 0.266 than those who have needs to use modern contraceptive methods (*appendix1*). Therefore, it is possible to reflect that the attitude of married women in the study area had a good opportunity for success of family planning and having welfare in family safety in the study area. The increasing number of women using MCM encouraged non-users to start using contraception.

Table 4: Religious beliefs and attitudes

Questions	Response	Frequency	Percent
Is there any prevented contraceptive method due to religion in your locality?	No	84	53.5
	Yes	73	46.5
Do you think that using modern contraceptives is sinful?	No	79	50.3
	Yes	78	49.7
	Total	157	100
Do you want to know about the modern contraceptive methods?	Disagree	5	3.2
	Agree	152	96.8
Do you want to discuss the modern contraceptive methods?	Disagree	4	2.5
	Agree	153	97.5
Do you want to use the modern contraceptive methods?	No	14	8.9
	Yes	143	91.1
Are you encouraging others to use modern contraceptive methods?	No	14	8.9
	Yes	143	91.1
Does a using modern contraceptive method reduce the sexual satisfaction?	Disagree	30	19.1
	Agree	3	1.9
	No response	124	79.0

4.5. Husband's influence and participation on MCM

Husbands' support or opposition to their wives' on modern contraceptive use has a strong impact on contraceptive use in the study area. From 157 respondents 139 (88.5%) women described that their husbands had a positive influence on the modern contraceptive, but 18(11.5%) women responded that their husbands had no positive attitude on modern contraceptives and they did not discuss about MCM with their husbands. Many (79.6 %) respondents discussed about the type of MCMs they used with their husbands. However,

20.4% respondents did not discuss the type of MCMs they used with their husbands (Table 5). When we see the responses of women in the study area on the decision making process of termination of using modern contraceptive use 77.7% of respondents discussed freely with their husbands. Only 19.7% of respondents made decision on termination of contraceptive use by themselves without the interference of their husbands; and 2.5% respondents noted that decisions were made by their husbands only without involvement of women (Table5). The number of children that couples want to have in the future been decided through consensus between husband and wife 91.1% that is encouraging. A considerable number 36(22.9%) of husbands opposed their wives on the modern contraceptive usage. This has a great influence on the modern contraceptive use in the study area. Most of husbands (77.1%) supported women's use of modern contraceptive. The odds ratio of women who don't discuss with their husband on family planning is decreased by factor of 0.254 in using modern contraceptive methods than those who have discussed with their husband on family planning and using modern contraceptive methods. The odds ratio of women who haven't discussion with their husband on number of children had decreased in their use of modern contraceptive methods by a factor of 0.232 than those who are discussing freely with their husbands on number of their children (*appendix1*). In the FGD and in-depth interview participants forwarded that husbands are developing a positive attitude towards women's use of MCM. These changes were the result of continuous community awareness raising programs on MCM organized by health extension workers at the kebele level.

The studies by Sara (1999) found out that men's support or opposition to their partners' practice of family planning has a strong impact on contraceptive use in many parts of the world including Africa. In Ethiopia most men have negative attitudes about family planning. Some men fear that family planning will make their wives independent of their control. They fear that their wives will have sex with other men if they are no longer at risk of pregnancy. Most men may be unwilling to have their wives adopt family planning, they themselves know little about it. Traditional, social norms often have required men to maintain the honor and position of their extended family (Alemayehu, 2012). Decision making on family planning between husbands and wives play a great role on modern contraceptive use. Women in developing countries, including Ethiopia are either under collective decision making with

their partners or completely rely on the male partner's decision on issues that affect their contraceptive use (Mussie et al., 2014). Whereas in the rural setting, better knowledge, fear of partner's opposition or negligence, involvement in decisions about child and economic affairs were statistically significant factors for better decision making power of women on the use of modern contraceptive methods (Binyam et al., 2011).

Table 5: Husband's influence and participation

Question	Response	Frequency	Percent
Does your husband have a positive attitude towards use of MCM?	No	18	11.5
	Yes	139	88.5
Have you ever discussed with your husband about family planning?	No	19	13.4
	Yes	136	86.6
Have you discussed on the contraceptive methods you are using with your husband?	No	32	20.4
	Yes	125	79.6
Who is deciding on termination of using contraceptive methods?	Only me	31	19.7
	My Husband and I	122	77.7
	My Husband only	4	2.5
			4
Who make decision on using or not using contraceptive methods?	Only me	29	18.5
	My Husband and I	123	78.3
	My Husband only	5	3.2
Who decides the number of children to be delivered?	Only me	11	7.0
	My Husband and I	143	91.1
	My Husband only	3	1.9
Are you discussing on the number of children to be delivered with your Husband?	No	19	12.1
	Yes	138	87.9
Is your husband opposed you for using modern contraceptive methods?	No	121	77.1
	Yes	36	22.9

4.6. Influence of income and sex preference

Influence of income on modern contraceptive methods usage level had a great influence. About 118(75.2%) respondents indicated that income was a significant determinant factor to make decision on contraceptive use, whereas 39(24.8%) respondents said that income had no influence to make decision on contraceptive use (Table6). Income of respondents is also contributed to the status of using modern contraceptive methods; women who have not good income were decreased by a factor of 0.43 on using modern contraceptives than those who

had good income (*appendix1*). This result implies that as the families' income increases their need of having more child increases that lead women decide not to use MCM, and when the income level of the family is small the opposite will be practiced. The study illustrated that about 70 (44.6%) of respondents preferred to have additional children both females and males; while 30 (19.1%) and 25(15.9%) respondents preferred to have additional female and male children respectively. The rest 32(20.4%) of respondents did not want to have additional children (table6). The odds ratio of women who have not preference of child sex is increased using modern contraceptive methods by a factor of 6.362 than those who have preference of their child sex. The odds ratio of women who have not need to additional children of using modern contraceptive methods is decreased by a factor of 0.110 than those who have needs to additional children (*appendix1*). The qualitative data reveal that many families consider their income to make decision on contraceptive use or not, to limit the number of children. In one hand some families considered their economic potentials, size of farmland, number of oxen, cows, sheep, goats and the amount of money they owned to decide on contraceptive use and limit the number of children born. On the other hand there are conditions that families did not consider their income to decide to use or not MCM. Based on the data it is possible to conclude that sex preference among married women of age 15-49 had a great influence of using modern contraceptive methods.

Table 6: Influence of income and sex preference

Questions	Response	Frequency	Percent	
Does family income influence decision on using or not using contraceptive methods?	No	39	24.8	
	Yes	118	75.2	
Pearson's chi-square		62.5		P= .000
Sex preference	Freq.	Percent	X²	P= value
Female children	30	19.1	8.438	P= .038
Male Children	25	15.9		
Both Male and female children	70	44.6		
don't want additional children	32	20.4		
Is the need of having female or male children become the reason for not using contraceptive methods?	No	100	63.7	
	Yes	57	36.3	
Pearson's chi-square			25.906	P= .000

5. Conclusion

The study attempted to identify determinants of modern contraceptive use among women of reproductive ages and the relationship between those variables and the modern contraceptive use. The study identified that, among the influential factors husbands opposition to modern contraceptive methods, couples sex preference, education status of women and age of women especially at age group of 20-24 were the most determinant factors for using MCM among women in the reproductive ages of 15-49 in the study area. Attention should be given to women education, improving economic status of women, raising community awareness on modern contraceptive methods facilitating peer and spousal discussion for the better use of modern contraceptive methods. Policy formulation and planners should consider the adoption of family planning services for couples who are living in rural areas of Ethiopia.

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Appendix.1. Odds Ratio predicting using modern contraceptive methods among different variables

Covariates	B	S.E.(B)	Wald	df	p-value	Exp(B)
Age of women			102.841	5	.000*	
15-19	-.325	.197	2.708	1	.100	.723
20-24	.845	.107	62.255	1	.000*	2.327
25-29	.047	.137	.120	1	.729	.954
30-34	.125	.057	4.752	1	.029*	1.133
35-39	-.993	.449	4.886	1	.027*	.370
40-44(ref.)						1.000
Education Status of women			37.477	4	.000*	
Illiterate	-.717	.252	8.075	1	.004*	.488
Read and write	-.698	.360	3.761	1	.052	.498
Elementary	.694	.251	7.643	1	.006*	2.002
Secondary and higher(ref.)						1.000
Number of Living Children						
No	-	.424	35.475	1	.000*	.080
Yes(ref.)	2.526					1.000
Knowledge of women on MCM						
No	-	.773	19.660	1	.000*	.032
Yes(ref.)	3.427					1.000
Orthodox Religion influence on MCM						
No	-.729	.354	4.250	1	.039*	.482
Yes(ref.)						1.000
Attitude of respondents						
Thinking using MCM as committing sin						
No	-.680	.351	3.744	1	.053*	.507
Yes(ref.)						1.000
Inclination to know about MCM						
No	-	.787	15.839	1	.000*	.044
Yes(ref.)	3.131					1.000
Need to discuss on						

MCM	-	.787	15.839	1	.000*	.044
No	3.131					1.000
Yes(ref.)						
Husbands' Influence						
Discussion with husbands on FP						
No	-	.596	5.318	1	.021*	.254
Yes(ref.)	1.372					1.000
Discussion with husbands on MCM						
No	-	.603	5.135	1	0.23*	.255
Yes(ref.)	1.367					1.000
Discussion with husbands on Number of Children						
No	-	.543	7.245	1	.007*	.232
Yes(ref.)	1.462					1.000
Husbands opposition on MCM						
No	1.049	.478	4.813	1	.028*	2.856
Yes(ref.)						1.000
Influence of Income						
No	3.148	.596	27.859	1	.000*	0.43
Yes(ref.)						1.000
Influence of sex preference						
No	1.850	.535	11.945	1	.001*	6.362
Yes(ref.)						1.000
Need to have additional children						
No	-	.554	15.816	1	.000*	.110
Yes(ref.)	2.203					1.000

* Statistically Significant at (p<0.05) ref. = reference category S.E= standard error