Full Length Research Paper

Family planning service utilization in Mojo town, Ethiopia: A population based study

Abebe Gizaw[1] and Nigatu Regassa[2]*

[1]Addis Ababa University, Institute of Population Studies, Addis Ababa, Ethiopia.
[2]Hawassa University, Institute of Environment, Gender and Development, P. O. Box 679, Hawassa, SNNPR, Ethiopia.

This cross-sectional study aims at identifying the demographic and socio economic barriers to family planning services utilization in Mojo town, Oromiya region of Ethiopia. The study used data collected from 551 women respondents (age 15 to 49) selected through systematic random sampling techniques. Data were analyzed using both univariate and multi-variate (logistic regression) statistical techniques. The findings of the study revealed that the level of knowledge and approval of family planning were high, 91.5 and 82.2% respectively. However, the actual practice of family planning methods was found to be low where only 38.3 were using any family planning method at the time of the survey. The most common methods for both ever and current users were injectable, pills and condom, whereas the most common source of family planning information was reported to be clinics. The logistic regression model showed that the likelihood of family planning service utilization is higher for those with higher parity, literate, approved use of family planning methods, discussed with husband/partners and those exposed to mass media. Fertility related, opposition, methods related, and access to sources/knowledge were reported reasons by non-users. Finally, based on the key findings of the study, some plausible recommendations were given which includes: educating potential users about the benefits of family planning, intensive male-targeted information, improving accessibility and availability of contraceptives and building the capacity of service providers at the institutional level.

Key words: Barriers, contraceptive, service utilization, determinants, Mojo town.

INTRODUCTION

Family planning (FP) could prevent as many as one in every three maternal deaths by allowing women to delay motherhood, space birth, avoid unintended pregnancies and abortion and stop childbearing when they reached their desired family size (Carl et al., 2008). Evidence suggests that more than half of all couples in the developing world are using family planning to delay, space or limit future pregnancies, yet the need for FP keeps increasing as the number of women of reproductive age continues to grow. An estimated 137 million women worldwide have unmet need for FP, that is, they are not using any method and report that they wan to avoid pregnancy (Rhoda et al., 2009).

Ethiopia is one of the developing countries where population issue has become a major area of concern

during the last few decades. The country began family planning services through Family Guidance Association of Ethio-pia, established in 1966. However, the fertility regulation efforts made so far in Ethiopia through Family Guidance Association and other organizations are minimal (UN, 1998). Ethiopian Demographic and Health Survey of 2005 revealed that knowledge of contraception has remained consistently high in Ethiopia over the past five years with 88% of currently married women having heard of at least one method of contraception. However, actual contraceptive practice among women of reproductive age group remained very low (CSA and Macro, 2006). This high knowledge with low utilization rate is mainly because of different barriers to decision on use of contraceptives.

During the last few years, studies have documented that FP service is influenced by various factors which includes demographic characteristics, psychological, knowledge and attitudinal factors and the like (Ibnouf, 2007; Nidiaye, 2003; Tawiah, 1997; Agyei and Migadde,

---

*Corresponding author. E-mail: negyon@yahoo.com. Tel: 251-046-2203801.

1995). Others are social factors such as the organization of contraceptive health care, the quality of the information given by professionals and the influence of the mass media, which all play significant role in contraceptive choices (Speizer 2004; Islam et al., 2004; Ozlem, 2006).

Despite the fact that FP services are made accessible nearly at all major urban areas in Ethiopia (including the study area, Mojo town) and in most instances at lower or no cost, the decision that lead women to use the services seems to occur within the context of their marriage, household and family setting. It is thus important to examine the extent to which women are making use of the services and answer why large majority of women do not use the services. The present study therefore aims at examining both the level and barriers to utilization of FP services in one of the fast growing town of Ethiopia, Mojo town. The study answers three major questions:

(a) Does spousal communication positively affects FP service utilization?
(b) Are older and high parity women likely to use FP compared to women with low parity (c) Does exposure to mass media make differences for FP service utilization among women in Mojo town?

DATA SOURCES AND METHODOLOGY OF THE STUDY

The study was conducted in Mojo town- Oromiya region, Ethiopia. It is located in the central part of Ethiopia with a population of about 29,272.The majority of the inhabitants belongs to Oromo ethnic group, with small proportions of other ethnic origins. The major occupations range from trading to civil service. The town has one government health station and five private clinics. Most of the health institutions provide modern family planning services.

The main data for this study has come from primary data collected from 551 women aged 15 to 49. The study employed cross-sectional study design where the data were collected at a specific point in time. The sample size was estimated using Cochran's (1977) sample size formula given in the annex.

The sampling techniques used to draw the 551 subjects were simple random and systematic sampling techniques to ensure that the sample is representative of the entire population of the study area. Mojo town has two Kebeles (smallest administrative villages): Kebele 01 with 1418 households and Kebele 02 with 1622 total households. Taking the list of households from the Kebele administrations, 256 (from Kebele 01) and 295 households (from Kebele 02) were selected using systematic random sampling technique. Eligibility was based on age of women, and one respondent was randomly selected for the interview from each of the randomly selected households. In a situation where there were more than one eligible female respondent in the randomized household, lottery method was used to pick a respondent for interview.   However, if there was no eligible respondent in the selected household the next household to the right was selected from the same Kebele.

The collected data were entered, cleaned, and analyzed using SPSS software. Both univariate and multivariate analysis were used. In order to assess the relative importance of each predictor to the dependent variable (FP service utilization), by controlling for the effects of other variables, a binary logistic regression analysis was done. The result of the binary logistic regression models is presented as odds ratio, which is given by the form:

Log [P / 1-P] = b0 + b1X1 + b2X2 + … + bkXk…..

where X1, X2…   X k are set of independent variables; 0 is a constant while b's are regression coefficients; P is the probability of utilizing family planning services.

Current family planning methods utilization takes a value of one if the respondents reported currently using and zero otherwise. The reference category of each independent variable has a value of 1, and the values for other categories are compared to that of the reference category. A value less than one implies that individuals in that category have a lower probability of utilization of family planning service than individuals in the reference category. Likewise, a value greater than 1 indicates increased likelihood of reporting current utilization of family planning services (Table 4). Figure 1 illustrates the conceptual framework of the study.

RESULTS

Characteristic of the respondents

Table 1 shows the demographic characteristics of the respondents. With regards to the age distribution, it is seen that about 28.9% of them were between age 15 to 24, 37.7% (25 to 34) while the rest of respondents (33.4%) were 35 and above years old. Most of the respondents (35.4%) reported to have got married at age 19 and above, .21.9% got married in the ages between 15 to 18, 22.1% at the age less than fifteen years while the remaining 20.5% of respondents were never married during the survey.

A larger proportion of the women had more than five children (31.9%) and 21.6% had 1 to 2 children, 22.1% had 3 to 4 children and the remaining 24.3% had no living children at the time of the study. The majorities (50.1%) of the women reported having the desire to have 3 to 4 children in their lifetime and 32.1% desired 1 to 2 children while the remaining 17.8% wish to have five children and above.

Table 1 also shows the sex preference of the respondents. As can be seen from the table, the majority (51.9%) of respondents had sex preference for male instead of female and 42.1% of women believed that sex does not matter and another 6% of respondents believed that sex of children is determined by the will of God. About 12% of the respondents had no formal education, 27.4% had primary level education, 27.2% had secondary level education and 32.8% were in college and above education level.

Ever-use, current use and future intention of use of family planning methods

The respondents were asked whether they have ever used family planning methods or not (Table 2). Nearly 34% of them have ever practiced one form of family planning methods and 66.4% have never practiced family planning methods during their life. The most frequently
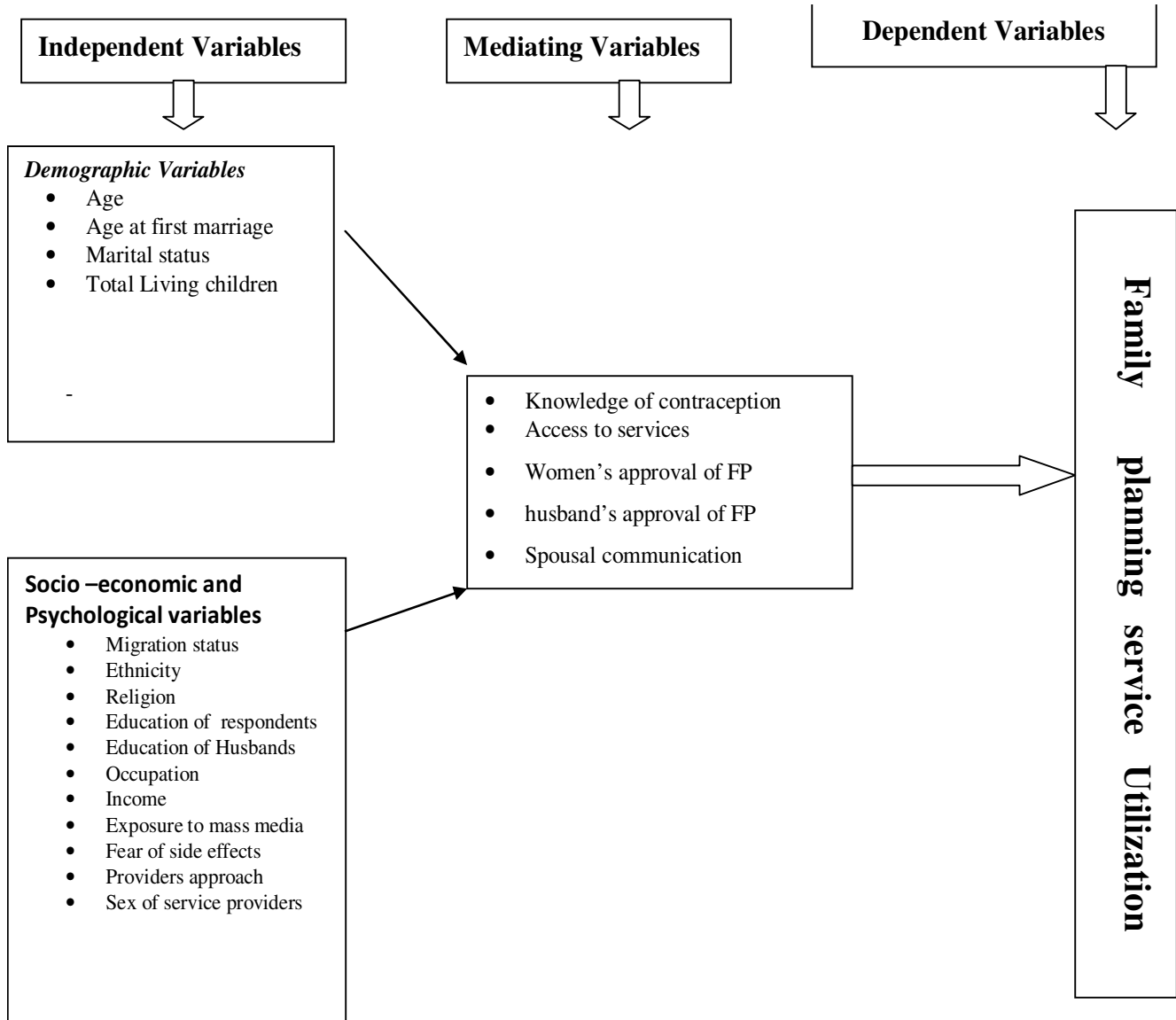
Figure 1. Conceptual framework showing the determinants of contraceptive service utilization. Note: Arrows indicate hypothesized relationships.

ever-used contraceptive method being injectable (37.9%) followed by pills (28.9%) whereas the least ever used family planning method was male sterilization (0.36%).

Only 38.3% of the respondents were using family planning methods at the time of the survey and the majorities (61.7%) were non-users. Among the list of family planning methods, injectable was the most frequently used (55.45%) followed by pills (26.06%), condom (7.1%), IUD (5.21%) and Norplant (0.95%) while the remaining 5.21% of respondents used other type of family planning methods.

Women were also asked whether they have any intention to use family planning services in the future. About 68% of respondents reported having the intention

to use family planning methods.

Reasons for non-utilization of family planning methods

For non-users, reasons were asked for non-utilization (Table 3). The reasons for the non-utilization of family planning methods among women are summarized under the following four headings.

Fertility related reasons: Fertility related reasons were the most reported reasons that affected the family planning services utilization among participants. Among fertility related reasons, abstinence was the highest

Table 1. Percentage distribution of respondents by selected demographic characteristics (n = 551).

Demographic characteristic	Percentage
Age	
15 - 24	28.9
25 - 34	37.7
35+	33.4
Age at first marriage	
Never married	20.5
<15	22.1
15-18	21.9
19 and above	35.4
Marital status	
Ever married	79.5
Never married	20.5
Total living children	
No Children	24.3
1-2 Children	21.6
3-4 Children	22.1
5+ Children	31.9
Ideal number of children desired	
1-2 Children desire	32.1
3-4 Children desire	50.1
5+ Children desire	17.8
Sex preference	
Have sex preferences	51.9
Sex does not matter	42.1
God knows	6.0
Education of women	
No education	12.5
Primary education	27.4
Secondary education	27.2
College/university	32.8

reported reason (23.2%) followed by infrequent sex (4.7%), sub fecund (3.2%) and breast-feeding (1.72 %).

Oppositions of husbands and others: Opposition is also another reason reported by women for non-utilization. This reason includes respondents' opposition, husband's opposition, and religious opposition, which accounted for 24.4% of reported reasons to family planning service utilization. Women who did not want to use family planning methods due to their own personal opposition contributed only 2.4% of non users and 10.9% had reported that they have faced oppositions from husbands/partners. Religious opposition has also appeared to be important barrier to non-use of family planning methods which accounted for 7.6% of the non-users.

Method related reasons: Sometimes potential family planning users prefer not to use more reliable methods due to misperceptions and concerns about their health. Method related reasons like health concerns, fear of side effects, and lack of access/too far, too much costs and health care provider bias accounted for 32.4% of non-utilizations of family planning services. The method related reasons were mainly health (17.9%) followed by fear of side effects (6.7%), lack of access (3.5%), health provider bias (2.4) and cost of contraceptives (1.8%).

Knowledge of method and source: The knowledge and sources of family planning methods were other important factors for non-utilization of family planning. This was mainly due to respondents lack of knowledge on the type of method or they did not know the source of family planning methods. Lack of knowledge of family planning methods accounted 6.5% while lack of sources of family planning method was also reported by 4.4% of non-users (Table 3).

Multivariate analyses: Results of binary logistic regression

A number of factors may influence respondent's decision of family planning services utilization. The result of logistic regression revealed the significant effects of some independent variables such as total number of living children, literacy status of respondent, women's approval of FP, spousal communication and media exposure. On the contrary, logistic regression result did not show significant relationship between the dependent variable and some independent variables such as age and FP approval of husband/partners. Variables such as age at first marriage, marital status, income, occupation of women and occupation of husbands were not entered into the regression model due to multi-colliniarity effects.

The logistic regression result has indicated that women who had 1to 2 living children were 4.613 times more likely to use family planning services than women who had no living children. In similar fashion, the probability of utilizing family planning services was high among women who had 3 to 4 and 5 and above children. The women who had 3 to 4 children were 3.638 times more likely to utilize family planning services than women who had no children while women who had five and more children were 7.382 times more likely to utilize family planning services than women who had no child.

The results of the study also showed that women's literacy status significantly affected the chance of FP service utilization: literate women are 1.903 times more

Table 2. Percentage distribution of respondents by ever-use, current-use and future intention of use of family planning methods, Mojo town.

Characteristic	Percentage
Ever used FP methods	
Yes	33.6
No	66.4
Types of methods ever used	
Condom	9.6
Injectable	37.9
IUD	4.2
Norplant	2.4
Female sterilization	1.1
Male sterilization	0.36
Pills	28.9
Breast feeding	1.8
Safe period	2.4
Others	1.1
Currently using any FP method	
Yes	38.3
No	61.7
Types currently using (n = 211)	
Condom	7.1
Injectable	55.45
IUD	5.21
Norplant	0.95
Pills	26.06
Others	5.21
Future intention	
Intend to use	68.1
Not intend to use	31.9

Questions relating to ever used methods allows for multiple responses. Only those who indicated "yes" to the options provided were reported in this table.

likely to use FP service than the illiterate ones. Women who approved of family planning method use were 6.023 more likely to use family planning services than those who disapproved. Women who discuss about family planning issues with their husband/partners were 9.644 times more likely to utilize family planning services than those women who never discussed such issues with their partners. Finally, women with no media exposure are about 56.7% less likely to use a method of family planning compared to the reference category (Table 4).

DISCUSSION

The study has aimed at examining the barriers to family planning service utilization in Mojo town, Ethiopia. The

finding has revealed that the actual level of family planning service utilization is low (38.3%), being a town located within short range of other big cities and towns (such as Addis Ababa, Adama and Bishoftu) which have relatively higher utilization rate.

The study has documented that there are many reasons and barriers reported by women for not utilizing FP services. The most important reasons reported are fertility reasons, opposition of husbands, method related reasons and poor knowledge of method and sources. Further to these reasons, there were also the problem of availability and accessibility of family planning services. In connection with this, key informants have reported that they did not have sufficient discussion with the clients mainly because of shortage of appropriate time and counseling center/room. The limited time and place for service provision seem to affect the family planning service delivery and utilization. On the other hand, the reports from health station and clinics showed that pills, injectables and condoms were made available in all these institutions. Permanent methods of family planning services were not offered. The frequency of family planning discussion with clients was reported insufficient mainly due to the fact that effective discussion on family planning and reproductive health needs good proportion of health care providers to clients. Only mass gatherings and short discussions are reported to be made at the health institutions. This seems to reduce comfort on the part of the clients to openly discuss issues with the health professionals. Since there is no payment for modern contraceptive methods, respondents did not raise financial cost issue as barriers. However, the supplies of family planning methods were very limited in number, affecting women's family planning method choices. On the other hand, respondents reported that the names of some of the modern family planning methods were not clear and easily understandable.

In order to meet the second objective of the study, we have examined the associations between selected explanatory variables and the main study variable (FP service utilization). The study identified five variables predicting the likelihood of FP service utilization which includes: total number of living children, literacy status, women's' approval of FP, spousal communication and exposure to media.

The total number of children and family planning service utilization are strongly related. If women have more children who are living with them, the possibility of using family planning methods for limiting is expected to be high, and if the number of children desired by women is perceived to be 'not enough', they may use family planning methods for spacing purpose. Consistent to this result, a study in Pakistan showed that the odds of using a family planning method increased with parity (Pasha et al., 2001). Another study conducted using the national survey data of Turkey (Ozlem, 2006) indicated that the number of living children seems to be negatively associated with contraceptive method. Studies in Africa

Table 3. Distribution of respondents by reported reasons for non utilization of family planning services, Mojo town.

Reason	Percentage
Fertility-related reasons (n = 110)	
No having sex	23.2
Infrequent sex	4.7
Sub fecund /in fecund	3.2
Breast feeding	1.72
Opposition to use (n = 83)	
Respondent opposed	2.4
Husband opposed	10.9
Others opposed	3.5
Religious opposition	7.6
Method-related reasons (n = 110)	
Health concerns	17.9
Fear side effects	6.7
Lack of access/too far	3.5
Costs too much	1.8
Health care provider bias	2.4
Lack of knowledge (n = 340)	
Knows no method	6.5
Knows no source	4.4

(Ghana, Uganda, Senegal and Sudan) showed consistent results (Ibnouf, 2007; Nidiaye, 2003; Tawiah, 1997; Agyei and Migadde, 1995). The educational status of women has appeared to be significant predictors of family planning services use. Compared to women with no education, literate women had greater odds of utilizing family planning service (OR= 1.903). This is consistent with the study done in Mayan by Bertrand et al. (2000) who found that education affects the distribution of authority within households, whereby women may increase their authority within the household which in turn affect fertility and use of family planning services. A study conducted in Turkey also indicated that woman with completed primary schooling has a nearly 30 percentage point higher probability of being aware of one of the two main prevention methods than a woman with no education (Koc, 2000).

Women who approved family planning services use were 6.023 more likely to use family planning services than women who disapproved use of family planning methods. A study conducted in Nigeria showed that men often have positive attitudes towards family planning, but women believe that their husband disapproves of family planning , and hence do not want to use family planning (Feyisetan and Bamiwuye, 1998). A study in Turkey (Ozlem, 2006) revealed that women who approved of family planning are 6.31 times more likely to use a the impact of spousal communication and approval of family planning methods are particularly pronounced when the

respondents have approved of family planning methods. The finding of this study showed that women who discuss about family planning issues with their husbands/partners were 9.644 times more likely to utilize family planning services than those women who do not discuss family planning issues. Consistent to this finding, the study conducted in Nigeria reported that 7% of women who have never discussed family planning issues with their husband utilize FP methods compared to 27% of women who discussed family planning more often. Conversely, utilization of contraceptives is much higher among women who believed that their husbands support the use of FP (Feyisetan and Bamiwuye, 1998).

Similarly, a study conducted in Tigray region (Northern Ethiopia) by Gebrekidan documented that women who had frequent discussion with their partners were more likely to utilize family planning services than those who had no discussion on family planning issues with their spouses (Gebrekidan, 2002). A study conducted in Kenya reported that husband -wife communication, particularly the wife's perception of her husband's approval of family planning, was highly associated with current contraceptive use (Lasee and Becker, 1997). A study conducted in Ghana has also documented similar finding (Salway, 1994).

Media exposure exerts a considerable influence on family planning service use. Women who are exposed to any one of the three media, namely, radio, television, or newspapers have higher family planning service use compared to women who have had no media exposure at all. In this study, women with no media exposure are about 56.7 % less likely to use a method of family planning. The influence of mass media (especially radio programs) has great benefits in influencing the behaviors of those who cannot read and write by complementing printed media exposures.

Finally, it is important to mention that the aforementioned variables are barriers to or risk factors for non-utilization of FP services in the study area, and in no way, be considered as causal factors. This is a major limitation of cross-sectional studies of this kind. Among the main strengths, the study was based on a large sample (551 women) selected randomly from Mojo town, and hence its findings can be generalized to the entire population of the town seeking the services. Also, in view of the fact that many of the studies are either national or regional level secondary data analysis; this study is believed to give better insight into the problems at population level.

CONCLUSIONS AND RECOMMENDATIONS

Although knowledge of contraceptive methods was high among women in the study population, reported level of current utilization of family planning methods was low (38.3%). The majority (61.7%) of the respondents are not using family planning methods due to a number of

Table 4. Results of logistic regression (odds ratio) for FP service utilization and selected explanatory variables, Mojo town (n = 551).

Variable	B	S.E	Sig.	Exp(B) (odd ratio)
Age				
15-24 (RC)			0.054	1.000
25-34	0.482	0.310	0.120	1.620
35+	-0.111	0.335	0.740	0.895
Total living children				
No children (RC)			0.000**	1.000
1-2 children	1.529	0.446	0.001**	4.613
3-4 children	1.291	0.475	0.007**	3.638
5+ children	1.999	0.440	0.000**	7.382
Literacy status				
Illetrate (RC)				1.000
Literate	0.643	0.234	0.006**	1.903
FP approval by women				
Disapproved (RC)				1.000
Approved	1.796	0.302	0.000**	6.023
FP approval of husband/partners				
No partners (RC)			0.369	1.000
Against	-0.576	0.392	0.142	0.562
I do not know	-0.490	0.406	0.228	0.613
Spousal communication				
Never discussed (RC)			0.000**	1.000
Discussed	2.266	0.380	0.000**	9.644
Exposure to media				
Exposed (RC)				1.000
Not exposed	-0.838	0.239	0.000**	0.433
Constant	-3.573	0.461	60.192	1.00

** $P<0.01$; * $P<0.05$, RC = reference category, S.E = standard error.

reasons which includes fertility related, opposition and methods related reasons. This suggests that knowledge about methods is not yet translated into practice in the study area. The family planning service utilization decisions is a function of wide range of factors which includes: disapproval of FP by the women themselves, lack of spousal communication, poor education and lack of access to media. It is also understood from the aforementioned discussions that the role of men in promoting FP utilization is generally low, partly suggesting that men are the primary decision-makers on issues relating to fertility and fertility control.

Finally, we forward some recommendation in light of the findings.: educating potential users about the benefits of family planning, the types of methods available, the relative effectiveness and side effects of the various methods; intensive male-targeted information, education, and communication about family planning; and improving accessibility and availability of contraceptives; and building the capacity of service providers at the institutional level are some of the possible interventions requiring the attention of local governmental and non-governmental bodies.

ACKNOWLEDGEMENTS

REFERENCES

Bertrand JT, Seiber E, Escudero G (2000). Contraceptive dynamics among the Mayan population of Guatemala: 1978-1998. Chapel Hill, North Carolina, University of North Carolina at Chapel Hill, Carolina Population Center [CPC].

Carl H, Mary MK (2008). World Population Data Sheet. Washington D.C: Population Reference Bureau.

CSA (Ethiopia) and ORC Macro (2006). Reported on 2005 Ethiopian demographic and health survey Addis Ababa, Ethiopia and Calverton, Mary land USA

Cochran S (1977). Sample Size Determination, New York: John Winley & Sons, Inc, NewYork.

Feyisetan BJ, Bamiwuye S (1998). Postpartum Counseling and Contraceptive Use in Nigeria. Soc. Sci. Rev., 15(1): 30-41.

Islam MA, Padmadas SS, Smith PWF (2004). Degree and determinants of men's contraceptive knowledge in Bangladesh. British Society for Population Studies Annual Conference.

Lasee A, Becker S (1997). Husband wife communication about family planning and contraceptive use in Kenya. Int. Family Plann. Perspect., 23(15): 20-33.

Ozlem A, Hatice F (2006). On the use of contraceptive methods among married women in Turkey. Eur. J. Contraception Reprod. Health Care, 11(3): 228-236.

Pasha O, Fikree FF, Vermund S (2001). Determinants of Unmet Need for Family Planning in Squatter Settlements in Karachi, Pakistan. Asia-Pacific Population J., 16(2): 93-108.

Rhoda S, Lori A, Jay G, Donna C (2009). Family Planning Saves Lives. Population Reference BuREAU, 4th Ed. USA.

Salway S (1994). How attitudes toward family planning and discussion between Wives and husbands affect contraceptive use in Ghana. Int. Family Plann. Perspect., 20: 44-47, 74.

Speizer IS, Mullen SA, Amegee K (2001). Gender differences in adult perspectives on adolescent reproductive behaviors: Evidence from Lome, Togo. Int. Family Plann. Perspect., 24(4): 178-185.

UN (1998). World Population Monitoring. Reproductive rights and reproductive health, New York.

Tawiah EO (1997). Factors affecting contraceptive use in Ghana. J. Biosoc. Sci., 29(2): 141-149.

Agyei WK, Migadde M (1995). Demographic and sociocultural factors influencing contraceptive use in Uganda (January). J. Biosoc. Sci., 27(1): 47-60.

Nidiaye CA, Delaunay V, Adjamagbo A (2003). Knowledge and use of contraceptive methods in rural Sereer, Senegal. Sante, 13(1): 31-37.

Ibnouf AH, Van Den Borne HW, Maarse JAM (2007). Utilization of family planning services by married Sudanese women of reproductive age. Health J., 13(6): 1-9.

ANNEX 1

Sample size estimation

The sample size determination formula is adopted for this study is given by (Cochran, 1977):

$$n = \frac{\dfrac{Z^2 p(1-p)}{d^2}}{1 + \dfrac{1}{N}\left(\dfrac{Z^2 p(1-p)}{d^2} - 1\right)}$$

where n = sample size; Z= standard normal distribution which is 1.96.   P=percentage of women who are currently using any methods of contraceptive for Oromiya region in EDHS 2005 was 13.6% (P= 0.136). That is 0.136 or 13.6%; E =is the margin of error in the study which is 0.03. The estimated sample size, using the above mentioned formula yields 551 (with 20% contingency).