

# Comparative Study of the Characteristics of Family Planning Service Users and non-Users in Northwest Ethiopia

Mesganaw Fantahun

## ABSTRACT

Three hundred and forty-four (49.6%) family planning users and 350 (50.4%) non-family planning users were included in a study to assess the factors that are associated with utilisation of family planning services at different levels of health institutions in northwest Ethiopia. Desire for (more) children was the most common reason (51.4%) for not using family planning services, followed by inadequate knowledge about family planning services (14.6%). A higher proportion of the non-users were illiterate, of lower parity, and had their last child under one year of age ( $P < 0.05$ ). In logistics regression analysis family planning was significantly lower in the illiterate. Positive husband's attitude had the strongest association (OR 9.3, 95% CI 4.6, 18.7) with family planning. In addition to programs that create demand for smaller well-spaced children, IEC and family planning services should target men and strong emphasis should be given to use of family planning methods in as early period after birth as possible. (*Afr J Reprod Health* 2006; 10[1]:62-70)

## RÉSUMÉ

**Etude comparée des caractéristiques des usagers et des non-usagers des services de la planification familiale au nord-ouest de l'Éthiopie** Trois cent quarante-quatre (49,6%) usagers de la planification familiale et trois cent cinquante (50,4%) non-usagers ont fait partie d'une étude pour évaluer les facteurs liés à l'utilisation des services de la planification familiale à tous les niveaux des institutions de la santé au nord-ouest de l'Éthiopie. Le désir d'avoir (plus) des enfants était la raison la plus commune (51,4%) pour ne pas se servir des services de la planification familiale, suivie d'une connaissance peu adéquate au sujet de la planification familiale (14,6%). La majorité des non-usagers étaient des illétrées, d'une parité moins élevée et dont le dernier enfant n'avait pas encore un an ( $P < 0,05$ ). Dans l'analyse de la régression logistique, la planification familiale était moins élevée de façon significative, chez les illétrées, l'âge du dernier enfant étant moins d'un an, et les femmes ayant moins de quatre enfants vivants et ceci était plus élevé chez les femmes célibataires. L'attitude positive du mari avait le plus grand lien (OR 9,3%, 95% CI 4,6,18,7) avec la planification familiale. En plus des programmes qui créent la demande pour peu d'enfants bien espacés, les services d'IEC et de la planification familiale devraient viser les hommes et beaucoup d'accent devrait être mis sur les méthodes de la planification familiale aussi tôt que possible après l'accouchement. (*Rev Afr Santé Reprod* 2006; 10[1]:62-70)

---

KEY WORDS: *Family planning, Utilization, Ethiopia*

---

**Correspondence:** Mesganaw Fantahun MD, MPH. Associate Professor, Department of Community Health, Faculty of Medicine, Addis Ababa University. P.O.Box 24762 Code 1000 Addis Ababa E-mail [Mesganaw\\_f@yahoo.com](mailto:Mesganaw_f@yahoo.com)

## **Introduction**

On average an Ethiopian woman delivers about 6 children in her reproductive years and the population is growing by 2.9% per annum. Maternal and child mortality rates are among the highest in the world. The contraceptive prevalence rate is estimated at 7%<sup>1-3</sup>.

The last Demographic and Health Survey(2000) found that of women who had visited a health facility in the 12 months preceding the survey, only 10% had visited the health institutions for family planning services<sup>3</sup>. Identifying the factors associated with utilisation of services is particularly important in resource poor African countries such as Ethiopia where a high proportion (about 50%) of the population does not have access to health facilities and fertility and maternal and child mortality rates are unacceptably high. While improving services availability is crucial in this low service coverage setting, expansion of services will have importance when the population optimally utilises the available services. The target population for this study are women who visited health facilities mainly for maternal and child health services and are supposed to have a greater potential for utilising available services compared to the general population. In addition to being conducted three years after data were gathered for the last Ethiopian Demographic Health Survey, this study provides opportunity for assessing why other service users do not use family planning programs.

The main objectives of this study are to assess the reasons for not using family planning services by women visiting health facilities and compare the differences in relevant characteristics between family planning users and non-users.

## **Materials and Methods**

This is a comparative cross sectional study conducted in North Gondar administrative zone in November, 2002. North Gondar zone is one

of the 11 administrative zones in Amhara region of Ethiopia.

It is found on the northwest of the country and has an estimated population of 2.8 million<sup>4</sup>. Although about 45% of the population of the zone is said to have access to health services, the contraceptive prevalence rate is below 10%. The reasons for the poor utilisation of family planning services even by comparison to other related services are not clearly understood. The study zone has different levels of government and non-government health facilities that offer family planning services. There are 2 hospitals, 14 health centers and 74 health stations in the zone that render family planning services. Health centres are supposed to be staffed by general practitioners, nurses, health assistants and other mid-level staff. They have laboratories for basic tests, and may have a few beds for problems that may be dealt at the level of the health institution. The health station is the lowest level of the conventional health system supposed to be staffed by a nurse and health assistants doing preventive, promotive and some curative activities.

As the staffing pattern, the facilities available and the way services are provided may differ by type/level and ownership of health institution, six service delivery points from all types of service delivery points were included in the study. The number of health facilities selected at each level was based on the total number of health facilities available in the zone and the number of clients served by the facilities. The health institutions were first grouped into the different categories - hospitals, health centres, health stations and private/ NGO clinics. The next stage consisted of classifying the facilities into two groups - those that were accessible (by car) and those that were not. At the third stage, study health institutions were randomly selected from those that were accessible proportional to number of health institutions in the zone and population served by each type. The health institutions included in the study were one hospital, two health centers, two health stations, and one non-governmental clinic.

All women of reproductive age group (15–49 years) who visited the selected health facilities over a three-week period except those that were critically sick were eligible for inclusion in the study. The study population was recruited from Maternal Health (MCH) clinics. It consisted of two random samples of women. A sample included those women whose main reason for visiting the study clinic was to obtain family planning services and the other consisted of women in the reproductive age group who visited the facility for other services. A subset of the later provided a sample of women who do not use family planning methods. About 5-10 clients a day were selected by systematic random sampling the sampling interval depending on the number of clients coming for the services during the day.

Assuming a 15 % difference between family planning service users and non-users in study characteristics (e.g. literacy status), 50% of the non-users having positive characteristics (e.g. being literate), 95% confidence level and 90% power, and 1:2 ratio of family planning clients and non-family planning clients the calculated sample size was 180 users and 359 other service users. Twice the number of clients who did not come for family planning was considered because among those that come for other services there would be family planning users who could be using the service at other times and/or other places. The sample that was going to be included (600) was expected to provide an additional 10% contingency.

However, more respondents (694) were included in the study.

Questionnaire was developed on major socio-demographic characteristics, knowledge of family planning utilisation of family planning services and reasons for non-use. The questionnaire was pretested in two health facilities that were not included in the study. It was then administered by trained nurses and health assistants from health institutions that were not included in the study.

Data were entered by experienced clerks and analysed using EPI INFO version 6. Odds Ratio, 95 % Confidence Intervals and Chi square tests were used to assess the strength and significance of observed associations with family planning. Data were then exported to SPSS–X where logistics regression analysis was done to find out the relative impact of significant factors ( $P < 0.1$ ) on bivariate analysis.

The objectives of the research were explained to zonal health department, relevant district health offices and selected health facilities directors and permission was obtained from them. Consent was obtained from all study participants after explaining the objectives and the procedures of the research. The questionnaire was anonymous and confidentiality was strictly maintained.

## Results

Table 1 shows the purposes of visiting health institutions by the study participants. Two hundred and seventy (38.9%) respondents visited the health

**Table 1: Purpose of health institutions' visit by women of reproductive age groups, North Gondar, Ethiopia, Oct – Nov. 2002**

Reasons	Frequency	Percent
Family planning	270	38.9
Child sickness	208	30.0
Personal illness	93	13.4
Antenatal care	81	11.7
Child immunization	36	5.2
Accompanying sick family member	4	0.6
Postnatal care	2	0.3
<b>Total</b>	<b>694</b>	<b>100.0</b>

Table 2. Sociodemographic characteristics of women of Reproductive age group who visited health institutions in North Gondar zone, Ethiopia. Oct–Nov. 2002.

Characteristics	Family Planning	Family planning users	Total non users	$\chi^2$	P
<b>Age</b>					
15 – 19	51(14.8)	54(15.4)	105(15.1)	6.82	0.07
20 – 29	168(48.8)	193(55.1)	361(52.0)		
30 – 39	94(27.3)	87(24.8)	181(26.1)		
40 – 49	31(9.0)	16(4.6)	47(6.8)		
<b>Marital status</b>					
Single	17(4.9)	22(6.3)	39(5.6)	21.7	<0.0001
Married	317(92.1)	288(82.3)	604(87.0)		
Divorced	9(2.6)	30(8.6)	39(5.6)		
Widowed	1(0.2)	11(3.1)	12(1.7)		
<b>Religion</b>					
Orthodox Christians	284(48.2)	305(87.1)	589(84.9)	4.96	0.08
Muslims	56(59.6)	38(10.9)	94(13.5)		
Others	4(36.4)	7(2.0)	11(1.6)		
<b>Educational status</b>					
Illiterate	138(40.1)	183(52.2)	321(46.3)	13	<0.005
Elementary (1 – 6 grades)	62(18.0)	54(15.4)	116(16.7)		
Secondary (7-12)	132(38.4)	109(31.1)	241(34.7)		
Above 12 grade	12(3.5)	4(1.1)	16(2.3)		
<b>Occupational status</b>					
Housewife and farmer	198(57.5)	144(41.1)	345(49.7)	Not valid	
Housewife	67(19.5)	108(30.8)	175(25.2)		
Government employee	27(7.8)	23(6.6)	50(7.2)		
Student	18(5.2)	9(2.6)	27(3.9)		
Merchant	11(3.2)	13(3.7)	24(3.5)		
Local drink seller	6(1.7)	16(4.6)	22(3.2)		
Daily laborer or maid	6(1.7)	9(2.6)	15(2.2)		
Unemployed	7(2.0)	21(6.0)	28(4.0)		
Others	4(1.2)	4(1.1)	8(1.2)		
<b>Number of births</b>					
0	22(6.4)	60(17.1)	82(11.8)	24.8	<0.0001
1 – 3	189(54.9)	197(56.3)	386(55.6)		
4 – 12	133(38.7)	93(26.7)	226(32.6)		
<b>Number of alive children</b>					
0	26(7.6)	61(17.4)	87(12.5)	19.4	<0.0001
1 – 3	200(58.1)	204(58.3)	404(58.2)		
4 – 12	118(34.3)	85(24.3)	203(29.3)		
<b>Age of last child</b>					
< 1 year	55(17.3)	93(32.1)	148(24.4)	20.5	<0.0005
1 – 2 years	119(37.4)	97(33.6)	216(35.6)		
3 – 4 years	90(28.3)	54(18.7)	144(23.7)		
5+	54(17.0)	45(15.6)	99(16.3)		
<b>Educational status</b>					
Illiterate	138(40.1)	183(52.2)	321(46.3)	13	<0.005
Elementary (1 – 6 grades)	62(18.0)	54(15.4)	116(16.7)		
Secondary (7-12)	132(38.4)	109(31.1)	241(34.7)		
Above 12 grade	12(3.5)	4(1.1)	16(2.3)		

facility for family planning. The rest visited the health institution for other reasons.

In this study 344 (49.6%) family planning users (not necessarily at the health facilities where interview was conducted) and 350 (50.4%) non-family planning users were identified. *Table 2* shows the socio-demographic characteristics of the study population. The majority of the respondents belonged to the age group 20 – 29 (52.0%), were married (87.0%), Orthodox Christians (84.9%), combined household responsibilities with farm work (49.7%). Three hundred and twenty-one (46.3%) were illiterate while the majority of the rest had elementary or secondary school education. Sixteen women (2.3%) had higher education above grade 12. The mean number of births was  $2.9 \pm 2.4$ , range 12. Mean age of the youngest child was  $2.5 \pm 2.4$ . There were statistically significant differences between family planning users and non-users in marital status, educational status, number of births and age of last child ( $P < 0.05$ ). A higher proportion of the non-users were illiterate, of lower parity, and had their last child under one year of age (*Table 2*).

Among the 350 non-users, 287 (82%) answered that they know (a) method(s) to avoid pregnancy. Eighty-five women (24.3%) could cite three or more methods of family planning. In contrast 161 (46.8%) of the users named three or more methods. The difference is statistically significant ( $P < 0.001$ ). Two hundred and seventy (77.1%) non-users said that they approve family planning. Thirteen (3.7%) disapproved it while the rest 67 (19.1%) said they don't know.

Desire for (more) children was the most common reason (51.4%) for not using family planning services. The next most frequently mentioned reasons were inadequate knowledge about family planning services (14.6%), religious reasons (13.4%), fear of side effects (13.3%), and husband's disapproval (6.3%) (*Table 3*).

*Table 4* shows the relationship of number of children with desire to have more children among non-family planning users. There was a statistically significant association between desire to have children and number of children. However, a relatively high proportion of women with high parity (5 children or more) still wanted to have more children.

**Table 3: Reasons for not using family planning methods among women of reproductive age groups who visited health institutions, North Gondar, Ethiopia. Oct – Nov. 2002**

Reasons for not using FP methods	Frequency	Percent*
Desire to have (more) children	180	51.4
Lack of (poor) knowledge about FP services	51	14.6
Religious reasons (sinful to use FP)	47	13.4
Fear of side effects	46	13.3
Husband disapproves	22	6.3
Breastfeeding/baby too young	19	5.4
Cultural reasons (taboo)	14	4.0
Long waiting time at health institutions	7	2.0
Preferred method not available	7	2.0
Won't be pregnant (not specified why)	6	1.7
No sexual partner at present	3	0.9

\* - More than one answer can be given by a respondent, hence percents do not add up to 100.

**Table 4: Desire for (more) children as a reason for not using family planning methods by number of children among women who visited health institutions in North Gondar, Ethiopia. Oct–Nov. 2002**

Number of children	Desire for (more) children		Total
	Yes	No	
0	41(68.3)	19(31.7)	60
1	40(50.6)	39(49.4)	79
2	41(63.1)	24(36.9)	65
3	22(40.7)	32(59.3)	54
4	19(48.7)	20(51.3)	39
5	8(36.4)	14(63.6)	22
6-11	9(29.0)	22(71.0)	31

Chi-square 22.2,  $P < 0.005$

**Table 5: Association of factors with family planning use in logistic regression analysis North Gondar, Ethiopia. Oct–Nov. 2002**

Characteristics	Odds Ratio	95% CI
<b>Age</b>		
15 – 19	1.20	0.37, 3.86
20 – 29	0.62	0.22, 1.76
30 – 39	0.47	0.19, 1.19
40 – 49		
<b>Marital status</b>		
Single	2.94	1.16, 7.44,
Divorced	1.89	0.71, 5.06,
Widowed	0.22	0.02, 2.54
Married		
<b>Religion</b>		
Muslims	1.14	0.66, 1.97
Others	0.56	0.13, 2.43
Orthodox Christians		
<b>Educational status</b>		
Illiterate	0.64	0.42, 0.97
Literate		
<b>Number of births</b>		
0		
1 - 3	0.20	0.24, 1.61
4 – 12	1.22	0.66, 2.25
<b>Age of last child</b>		
< 1 year	0.36	0.18, 0.70
1 – 2 years	0.90	0.48, 1.70
3 – 4 years	1.27	0.65, 2.46
5+		
<b>Husband's/partners attitude</b>		
Positive	9.25	4.58, 18.68
Unknown	0.51	0.21, 1.20
Negative		
<b>Number of alive children</b>		
0-3	0.48	0.21, 0.94
4+		

Among non-users of family planning methods, 270(77.1%) said that they approve family planning. Thirteen (3.7%) disapproved it while the rest 67(19.1%) said they don't know.

Four hundred and seventy women (68%) answered that their husbands or partners support the use of family planning methods whereas 61(8.8%) answered that their husbands or partners do not support the use of family planning method. One hundred women (14.4%) did not know about the husband's/partner's attitude towards use of family planning methods. The rest 63 (9.1%) did not respond. All of the non-responses were by the non-users. The non-response rate among the non-users was 18%. Three hundred and thirteen (91.0%) of the users and 157 (45%) of the non-users answered that their husbands/partners approve the use of family planning.

In logistics regression analysis, family planning use was found to be significantly lower in the illiterate, those with age of last child less than a year and women with less than four children alive. It was higher in single women. Positive husband's attitude had the strongest association (OR 9.3, 95% CI 4.6, 18.7) with family planning (Table 5).

## Discussion

Desire for (more) children was the most common reason (51.4%) for not using family planning services. A high proportion of women of all parities (29% - 68%) wanted to have (more) children. Thus, about half of the non-use of family planning can be attributed to lack of demand for family planning. Therefore, creating demand is a major issue in the use of family planning methods and consequently improvement of health and wellbeing of mothers, children and the society at large.

About 82% of non-family planning users know methods to avoid (unwanted) pregnancy. This is in accordance with reports of the last Demographic and Health Survey<sup>4</sup> that the majority of women of reproductive age groups

know family planning methods. As early as 1990, a nationwide survey had also reported knowledge of at least one method of contraceptive by women of reproductive age groups to be 62 %<sup>5</sup>. Lack of knowledge was mentioned as a reason for not using family planning by about 15% of the respondents. In addition, family planning users had a much better knowledge in terms of the number of methods they know, although the results are difficult to interpret, as it is not clear whether better knowledge led to better use of family planning methods or use of family planning methods led to better knowledge of the methods. However, assuming that knowledge can influence use of family planning, it gives a room for improving the situation in a short period of time compared to other interventions to create demand which would need much more resources.

This study showed statistically significant differences between family planning users and non-users in marital status, educational status, and number of children and age of last child in bivariate analysis. In logistics regression analysis family planning use was found to be significantly lower in the illiterate, those with age of last child less than a year and women with less than four alive children. It was higher in single women. A higher proportion of non-users were illiterate, of lower parity, and had age at last child of less than one year.

The findings imply that women do not start using family planning methods early after child bearing, thus being exposed to the risk of too close pregnancies with their negative consequences for both the mother and the baby<sup>6-11</sup>, although some studies have undermined the role of short intervals on the health mothers<sup>12</sup>. In a society with low contraceptive prevalence it is perhaps women with low parity and younger children that would be less motivated to use family planning. Single women may want to avoid pregnancy with out wedlock.

Educational status may operate through several factors. Illiterate women are less likely to

have good knowledge of family planning methods and the services provided. In addition, illiteracy may be related to poor decision-making power in the family.

The effect of education on family planning use and fertility reduction has been demonstrated by many studies. To mention a few, a study documented that education has a clear impact on both contraceptive knowledge and use by women, with higher educated women being more likely to use a contraceptive method. Illiterate women with no formal education were significantly less likely to use modern methods of contraception<sup>13</sup>. Education was reported to be the key indicator of women's status and unmet need progressively decreased with educational status and it was also a good indicator of met need in another study<sup>14</sup>. Along with other factors such as free partner choice and wealth of the family, women's education was associated with increased birth intervals in rural Tanzania<sup>15</sup>. An earlier study in Pakistan reported that women's education and the number of surviving children are key determinants in decision-making about contraceptive use<sup>16</sup>.

Husband's/ partner's attitude had the strongest association with family planning. The influence of husband's attitude on family planning use was reported in studies in Turkey<sup>17</sup>, Pakistan<sup>18</sup> and India<sup>19</sup>. The study in Turkey reported that among the six potentially identified obstacles, the women's perception that such behavior (contraceptive use) would conflict with her husband's attitude towards family planning and perception of the social and cultural unacceptability of contraception<sup>20</sup> were the two most important obstacles. On the other hand, studies have suggested that well designed education and services for men can significantly contribute to family planning method use and limit family size<sup>23</sup>. The contribution of husband's approval to family planning use/non-use/may have a higher effect in the general population of women of reproductive age groups since this study included

only women who used health services and may have a better decision making power.

Similarly, because this is an institution-based study, it represents the characteristics of health service users who in some aspects may differ from the general population of the zone. This is reflected by the literacy status of the population and the average number of births. The study population may have some differences from the general population in terms of education, income, knowledge about services, and the capacity to care one self. Thus some of the factors that influence family planning use or non-use may have stronger effects in the general population.

In conclusion, demand factors appear to have a great role in non-use of family planning services. This calls for health and development programs that would create demand for a small number of well-spaced children. Improving education of women is important both from long term perspectives of enhancing decision making, and acquisition of knowledge and positive attitude towards family planning. Improving knowledge of family planning services may have only some effect, but would contribute to increased family planning service use in a short period of time. Strong emphasis should be given to use of family planning methods in as early period after birth as possible in IEC programs. As husband's /partners attitude appears to have the strongest impact in family planning use, IEC and family planning services should also target men.

### **Acknowledgements**

This study was funded by Family Health International (FHI) through the Ethiopian Public Health Association (EPHA) for which I am grateful. My heart felt thanks are forwarded to Dr Maggwa Ndugga (Regional FHI director) and Dr Karen B. Allen (formerly FHI advisor) for their contributions in the design of the study and facilitating the research. Mr Ali Beyene (EPHA), Ms Kristen Kruger (FHI) and Mr Yenehun Tawye



(FHI) are also thanked for assisting the smooth progress of the research.

I would also like to express my gratitude to everybody, from the zonal health office head up to the smallest health unit in Gondar, who showed high enthusiasm and collaboration in the study. Last, but not least, I am grateful to the participants of the study.

## REFERENCES

1. UNICEF. The State of the World's Children. 2004
2. Ministry of Health of Ethiopia. Health and health related indicators. Planning and Programming 2002 - 2003. Addis Ababa.
3. Central Statistical Authority (Ethiopia) and ORC Macro. Ethiopia Demographic and Health Survey 2000. Addis Ababa, Ethiopia and Calverton, Maryland, USA. 2001.
4. North Gondar Zonal Health Department. Annual report. 2000
5. Central Statistics Authority. Population Analyses and Studies Center. The 1990 Family and Fertility Survey. Addis Ababa, 1991.
6. Smith GC, Pell JP, Dobbie R. Interpregnancy interval and risk of preterm birth and neonatal death: retrospective cohort study.
7. Conde-Agudelo A, Belizan JM. Maternal morbidity and mortality associated with interpregnancy interval: cross-sectional study
8. Kalida H, Shah GN, Farooq F. Some obstetric and foetal correlates in association with anemia in pregnancy. *Indian J Matern Child Health*. 1997 Apr-Jun;8(2):48-40.
9. Kalan JE. Reexamination of interpregnancy intervals and subsequent birth outcomes: evidence from US linked birth/infant death records. *Soc Biol*. 1997;44(3-4):205-12
10. Rosmans C. Birth spacing and child survival in rural Senegal. *Int J Epidemiol*. 1996 Oct;25(5):989-97.
11. Abebe GM, Yohannis A. Birth interval and pregnancy outcome. *East Afr Med J*. 1996 Aug;73(8):552-5.
12. Ronsmans C, Campbell O. Short birth intervals don't kill women: evidence from Matlab, Bangladesh. *Stud Fam Plann* 1998 Sep;29(3):282-90.
13. Thang NM, Huong VT. Changes in contraceptive use in Vietnam. *Soc Sci Med*. 2003 Sep;57(6):1099-115.
14. Al Riyami A, Afifi M, Mabry RM. Women's autonomy, education and employment in Oman and their influence on contraceptive use. *J Biosoc Sci*. 2003 Oct;35(4):527-43.
15. Larsen U, Hollos M. Women's empowerment and fertility decline among the Pare of Kilimanjaro region, Northern Tanzania. *Contraception*. 2003 Feb;67(2):133-7.
16. Lasee-A; McCormick-JB. Demographic and socio-economic determinants of contraceptive use in a low income community of Karachi. *JPMA-J-Pak-Med-Assoc*. 1996 Oct; 46(10): 228-31.
17. Sahin HA, Sahin HG. Reasons for not using family planning methods in Eastern Turkey. *Eur J Contracept Reprod Health Care*. 2003;8(1):11-16.
18. Casterline JB, Sathar ZA, Haque M. Obstacles to contraceptive use in Pakistan: a study in Punjab. *Stud Fam Plann*. 2001;32(2):95 - 105.
19. Chandhick N, Dhillon BS, Kambo I, Saxena NC. Contraceptive knowledge, practices, and utilization of services in the rural areas of India. *Indian J Med Sci*. 2003;57(7):303 - 10.
20. Oyediran KA, Ishola GP, Feyisetan BJ. Factors affecting ever-married men's contraceptive knowledge and use in Nigeria.