

Prevalence and Associated Factors of Unmet Need for Family Planning among Married Women in Rural Communities of Gonji Kolela District, North West Ethiopia: Cross-sectional Study

Alebel Biadgie^{1*}, Adane Nigusie², Simegnew Handebo² and Resom Berhe²

¹PHEM and Rehabilitation Officer, Amhara Regional State Health Bureau, Ethiopia

²Department of Health Education and Behavioral Science, Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Ethiopia

*Corresponding author: Alebel Biadgie, PHEM and Rehabilitation Officer, Health Office, Amhara Regional State Health Bureau, Ethiopia, Tel: +251-913673758; E-mail: adane_n@yahoo.com

Receive date: November 16, 2018; Accepted date: January 08, 2019; Published date: January 10, 2019

Copyright: ©2019 Biadgie A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Background: More than 200 million women in the developing world want to avoid pregnancy but are not using a modern method of contraception.

Methods: Community based cross-sectional study was conducted from January to march 2015 in Gonji Kolela District, West Gojam Zone Amhara Region. Six hundred fourteen married women were selected using multi stage sampling techniques. The data were collected using pre-tested semi structure questionnaire by trained data collectors. Data were entered and analyzed using SPSS 16.0 version. Logistic regression was done to identify factors associated with unmet need for family planning.

Results: The overall unmet need for family planning was 145 (23.8%) of which 105 (17.6%) was for spacing and 40 (6.6%) for limiting number of children. Respondents' age (AOR=4.13, 95% CI:1.86-9.17), educational status of respondent's partner (AOR=2.20, 95%CI:1.08-4.48), age at first marriage (AOR=2.11,95% CI:1.28-3.50), discussion on family planning with partner (AOR=0.20, 95% CI:0.12-0.34) and health extension workers (AOR=0.62, 95% CI: 0.40-0.96) in the last 12 months preceding study and decided the desire number of children before first pregnancy (AOR=0.20, 95% CI:0.12-0.33) had significance association with unmet need for family planning.

Conclusion: Considerable amounts of women had an unmet need for FP especially for spacing. Respondents age, education status of respondent's partner, age at first marriage, discussion with partners and health extension workers about FP issues in the last 12 months prior to study and decided the desired number of children were major factors associated with unmet need for FP. Barriers of unmet need for FP shall be explored qualitatively.

Keywords: Unmet need; Family planning; Married women; Ethiopia

Abbreviations: DHS: Demographic and Health Survey; EDHS: Ethiopian Demographic and Health Survey; FP: Family Planning; IUCD: Intrauterine Contraceptive Device; PI: Principal Investigator; RH: Reproductive Health; SNNP: South Nation and Nationality people of Ethiopia; SPSS: Statistical Package for Social Science; USAID: United State Agency for International Development; WHO: World Health Organization

Introduction

Family planning is defined as the use of modern contraceptives or natural techniques for either limiting or spacing pregnancies. It assists in reducing maternal and infant mortality by preventing closely spaced and ill-timed pregnancies which are the major contributor to maternal and infant mortality [1]. Unmet need for family planning is a combination of unmet need for limiting and unmet need for spacing. The unmet need for limiting is the proportion of married women who do not want any more children but are not using family planning method; as well the unmet need for spacing is the proportion of married women who want to postpone their next birth for two years or

more but are not using family planning method [2]. The unmet group also included all fecund, all those pregnant and lactating mothers whose current or previous pregnancies were unwanted or mistimed who were not using any FP methods [3].

Provision of family planning services has become the interventions choice to slow population growth. It is understood that child spacing and the timing in every birth can improve survival chances of the child and mothers. It also advances physical, mental and emotional health of the whole family. Different factors including social and cultural features have been shown to influence a decision to use contraception even with the availability of family planning service [4,5].

Worldwide, around 222 million women have an unmet need for family planning. Even if, more than 200 million women in the developing world want to avoid pregnancy, they are not using modern contraception. In Africa, 53% of married women have unmet needs for modern contraception. If the demand for family planning were met, 54 million unintended pregnancies, more than 79,000 maternal deaths, more than a million infant deaths, 90% of global abortion related and 20% of obstetric related mortality and morbidity could be averted each year [6,7].

In Ethiopia according to 2011 EDHS 25% of currently married women have an unmet need for family planning services; 16 percent have a need for spacing, and 9 percent have a need for limiting. This has the highest level of unmet need for family planning in Africa. In addition to this contraceptive prevalence rate is 29 percent for all women and 42 percent of currently married women.

Currently married women in urban areas are more likely than their rural counterparts to use a contraceptive method (59 and 38 percent), to use any modern method (56 and 37 percent), and to use any traditional method (4 and 1 percent) respectively. The factors are area specific; of them fear or experience a side effect, religion opposition, opposition to use, lack of knowledge and method related reason is some of them [8,9]. However, these factors vary from district to district. So this study is designed to identify the magnitude of un-met need family planning and associated factors in Gonji Kolela district.

Methods

Study setting and period

The study was conducted in Gonji Kolela district, West Gojam Zone Amhara region. There are 6 health centers, 26 health posts and 10 private clinics in the district. The total population of the district is about 119,482 of which 59,340 are females. In the district there are 26,201 households and 12,031 childbearing age women (21). The study was conducted from January to march 2015.

Study design

Community based cross-sectional study was employed.

Sampling and study participant

A single population proportion formula was used with an assumption of 0.05 level of significance, 95% confidence interval and 0.05 margin of error, 25.6% estimated population proportion [10]. And contingency for non-response rate of 5% and in order to avoid the design effect it was multiplied by 2. Hence, the total sample size was 614. The study population was all married women in the reproductive age group found in the selected kebeles.

Sampling technique

The study employed multi-stage sampling. First, six kebeles were selected by lottery method. The first House hold and study participant will be selected randomly and then the subsequent one would be chosen systematically at every "13th" interval. If there is more than one eligible study participants found in one house hold one would be selected randomly. On the other hand if there is no any eligible women from the chosen house hold the next house hold are considered.

Data collection procedures

Data were collected using a semi-structured questionnaire by trained data collectors. The tool was prepared in English and translated into Amharic and translated back to English by linguistic and health

professional to check consistency. A pre-test was done on 5% (31) participants in Yilmana district. The collected data were checked for completeness and consistency by supervisors and PI daily.

Operational definitions

Unmet need for Family planning: refers to currently married women who are fecund and who desire to either terminate (do not want anymore) or postpone (at least 2 years) childbearing, but who is not currently using a contraceptive method.

Fecund women: Refers to women who have the physiological capacity to give a child.

Kebele: Refers to the lowest government administrative hierarchy in Ethiopia.

Data analysis

Data cleanup and cross-checking was done before analysis. After checking for completeness and consistency, it was entered into Statistical Package for Social Science (SPSS) version 16 for analysis. Univariate analyses were carried out to describe socio-demographic characteristics of the respondents and facility giving family planning services. Bivariate and multivariate Logistic regression with an odds ratio along with the 95% confidence interval and p-value <0.05 were used to ascertain the association between unmet need and explanatory variables. Variables with p<0.2 at bivariate analysis were included in the multivariate binary Logistic regression to control confounding.

Ethical consideration

Ethical clearance was obtained from the ethical review committee of GAMBY College of medical science. Permission to conduct the study was obtained from Amhara national regional state research and technology transfer core process and Gonji Kolela district health office. Informed consent was obtained also from each participant.

Results

Demographic and socioeconomic characteristics of the study subjects

Out of 614 sampled participants, 610 respondents had responded for interviews and gave complete data, which makes the response rate of 99.4%. The mean age of the respondents was 30 ± 8.5 years. The majority of study subjects 143 (23.4%) were between the age of 35-39 and 555 (91.0%) orthodox religion followers.

Regarding to the educational status of respondents 514 (84.3%) and 392 (64.3%) their husbands had no formal education. Based on quartile classification, 75 (12.3%) of households had annual income less than 16000 ETB and 332 (54.4%) had between 16001-32000ETB. Radio was the major source of information for 531 (90.3%) of households. The mean age of the respondents at first marriage and child delivery were 16 ± 2.7 and 18 ± 2.1 respectively. About 179 (35.3%) of the study subjects were experienced child death (Table 1).

| Characteristics (n=610) | | Frequency | Percent (%) |
|-------------------------|-------|-----------|-------------|
| Age (N=610) | 15-19 | 100 | 16.5 |

| | | | |
|--|---|-----|------|
| | 20-24 | 74 | 12.1 |
| | 25-29 | 110 | 18 |
| | 30-34 | 105 | 17.2 |
| | 35-39 | 143 | 23.4 |
| | >40 | 78 | 12.8 |
| Educational status of respondent (N=610) | No formal education | 504 | 82.6 |
| | Elementary | 54 | 8.9 |
| | Secondary and above | 52 | 8.5 |
| Educational status of respondent's husband (N=610) | No formal education | 380 | 62.3 |
| | Elementary | 137 | 22.5 |
| | Secondary and above | 83 | 13.6 |
| Occupation status of respondent (N=610) | Housewife | 536 | 87.9 |
| | Employed in government and non-government institution | 10 | 1.6 |
| | Merchant | 38 | 6.2 |
| | Student | 26 | 4.3 |
| Occupation status of respondent's husbands (N=610) | Housewife | 409 | 67 |
| | Employed in government and non-government institution | 14 | 4.2 |
| | Merchant | 177 | 29 |
| | Student | 10 | 1.6 |
| Age at first marriage(N=610) | <18 | 405 | 66.4 |
| | >=18 | 205 | 33.6 |
| Age at first child delivery (N=507) | <18 | 214 | 42.2 |
| | >=18 | 293 | 57.8 |
| Number of ever born children (N=507) | <5 | 382 | 75.3 |
| | >5 | 125 | 24.7 |
| Number of total alive children (N=507) | <5 | 432 | 85.2 |
| | >5 | 75 | 14.8 |
| Desire number of children(N=608) | Decided | 300 | 49.3 |
| | Undecided | 308 | 50.7 |

Table 1: Demographic and socioeconomic characteristics of married women in rural communities of Gonji Kolela district, Northwest Ethiopia, 2015.

Client related characteristics of study subjects

Regarding the awareness about family planning methods 424 (69.7%) of the respondents had heard at least one FP methods. Majority 259 (61.1%) knows injectable, 90 (21.2%) pills and 3 (0.7%) know permanent methods.

When we see the sources of information 297 (70%) got information from health workers and 60 (14.2%) from friends and neighbors. Majority 531 (87.0%) of respondents had a pregnancy history; of which 507 (95.5%) had given birth. About 407 (66.9%) of study subjects had used FP methods previously (Table 2).

| Characteristics (n=610) | Frequency | Percent (%) |
|-------------------------|-----------|-------------|
|-------------------------|-----------|-------------|

| | | | |
|---|-------------------|-----|------|
| Currently using FP methods (N=610) | Yes | 447 | 73.5 |
| | No | 163 | 26.5 |
| Intention to use FP methods (N=608) | Yes | 551 | 90.6 |
| | No | 20 | 3.3 |
| | Not yet decided | 37 | 6.1 |
| The purpose of using FP methods (N=447) | Spacing | 413 | 92.4 |
| | Limiting | 34 | 7.6 |
| Type of FP methods that know (N=424) | Pill | 90 | 21.2 |
| | Injectable | 259 | 61.1 |
| | Implant/Norplant | 65 | 15.3 |
| | Condom | 7 | 1.7 |
| | Permanent methods | 3 | 0.7 |
| Source of information about Family planning (N=424) | Health workers | 297 | 70 |
| | Media | 10 | 2.4 |
| | Friends | 60 | 14.2 |
| | Husband | 17 | 4 |
| | School | 40 | 9.4 |

Table 2: Frequency distribution of client related characteristics of married women in rural communities of Gonji Kolela district, Northwest Ethiopia, 2015.

Out of 610 married women 447 (73.5%) were current user of FP methods; of this 413 (92.4%) use for spacing and 34 (7.6%) for limiting. The main reasons for non-users of FP methods were health concern and fear of side effect 78 (53.8%) followed by lack of awareness 23(15.9%) (Figure 1).

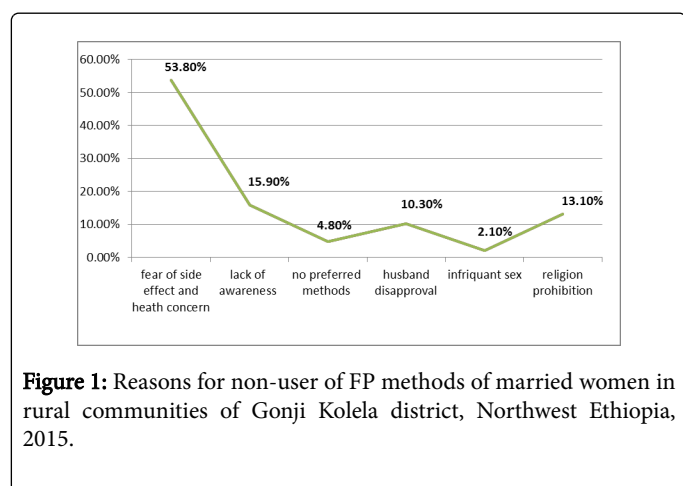


Figure 1: Reasons for non-user of FP methods of married women in rural communities of Gonji Kolela district, Northwest Ethiopia, 2015.

Facility related characteristics of study subjects

Majority 279 (62.4%) of respondents got FP services from the health post followed by health center 114 (25.5%) and 570 (93.7%) of study subjects took less than an hour for round trip to get FP service. More

than half 361 (59.2%) of respondents not discussed about FP service with their partner and 353 (57.9%) hadn't contacted and discussion with health workers in the last 12 months prior to this study (Table 3).

Factors associated with unmet need for family planning

Bivariate and multivariable logistic regression analysis of possible explanatory variable for unmet need for family planning was carried out on each socio-demographic and others characteristic. In bi-variate analysis age, respondent's educational status, partner educational status, age at first marriage, desired number of children, and a discussion about FP with a partner and health workers was independent predictors of unmet need. In multi-variable analysis women with age group 15-19 were 4.13 (AOR=4.13, 95% CI: 1.86-9.17) times more likely have unmet need compared to age group of 40 and above. Women with age at first marriage below 18 years were 2.11 (AOR=2.11, 95% CI: 1.28-3.50) times more likely have unmet need for family planning when comparing to 18 & above years.

A woman's husband who had no formal education were 2.20 (AOR=2.20, 95% CI 1.08-4.48) times more likely to have unmet need for FP comparing to partner with educational level of secondary and above. Other factors of unmet need for FP were discussion on family planning issues with husband and health extension workers. Married women who hadn't discussed about FP issues with their husbands were 4.93 (AOR=4.93, 95% CI: 2.94-8.20) and with health extension workers 1.62 (AOR=1.62, 95% CI: 1.04-2.54) times more likely to have unmet need for FP than their counterparts. More ever, married women who had not decided their desired number of children before first

pregnancy were 5.00 (AOR=5.00, 95% CI: 3.05-8.20) times more likely to have unmet need for FP than decided their desire number of children (Table 4).

| Characteristics (n=610) | | Frequency | Percent (%) |
|---|----------------|-----------|-------------|
| Place to access FP service (N=447) | Health center | 114 | 25.5 |
| | Health post | 279 | 62.4 |
| | Private clinic | 22 | 4.9 |
| | Drugstore | 32 | 7.2 |
| Time taken for round trip from the source of FP services (N=610) | <60 minutes | 570 | 93.4 |
| | >60 minutes | 40 | 6.6 |
| Discussion of FP with partner in the last 12 months (N=610) | Yes | 231 | 37.9 |
| | No | 361 | 59.2 |
| Contact and discussion of FP with health extension Worker in the last 12 months (N=610) | Yes | 239 | 39.2 |
| | No | 353 | 57.9 |
| The availability of convenient/chooses/FP methods in your nearest facility (608) | Yes | 436 | 97.5 |
| | No | 11 | 2.5 |

Table 3: Frequency distribution of facility related characteristics of married women in rural communities of Gonji Kolela district, Northwest Ethiopia, 2015.

| Explanatory variables | | Unmet need for FP | | Crude OR (95% CI) | Adjusted OR (95%CI) |
|--|---------------------|-------------------|-----|--------------------|---------------------|
| | | Yes | No | | |
| Age of the participants | 15-19 | 36 | 64 | 2.18 (1.10-4.33)* | 4.13 (1.86-9.17)* |
| | 20-24 | 26 | 48 | 2.10 (1.10-4.34)* | 3.85 (1.66-8.93)* |
| | 25-29 | 20 | 90 | 0.86 (0.41-1.80) | 1.01 (0.45-2.25) |
| | 30-34 | 17 | 80 | 0.75 (0.35-1.60) | 0.77 (0.33-1.75) |
| | 35-39 | 30 | 113 | 1.03 (0.52-2.03) | 1.37 (0.64-2.92) |
| | >=40 | 16 | 52 | 1 | 1 |
| Educational status of respondent | No formal education | 131 | 373 | 2.62 (1.10-6.30)* | 2.18 (0.78-6.02) |
| | Elementary | 8 | 36 | 1.70 (0.54-5.35) | 2.78 (0.57-9.10) |
| | Secondary and above | 6 | 38 | 1 | 1 |
| Educational status of respondent's husband | No formal education | 111 | 269 | 2.34 (1.22-4.48)* | 2.20 (1.08-4.48)* |
| | Elementary | 22 | 107 | 1.15 (0.54-2.47) | 1.30 (0.56-2.98) |
| | Secondary and above | 12 | 71 | 1 | 1 |
| Age at marriage | <18 | 116 | 278 | 2.44 (1.56-3.81)** | 2.11 (1.28-3.50)* |
| | >=18 | 29 | 169 | 1 | 1 |
| Discussion with husband about FP within 12 months | Yes | 24 | 207 | 1 | 1 |
| | No | 121 | 240 | 4.33 (2.70-6.94)** | 4.93 (2.94-8.20)** |
| Discussion with health workers about FP within 12 months | Yes | 47 | 192 | 1 | 1 |

| | | | | | |
|----------------------------------|-------------|-----|-----|--------------------|--------------------|
| | No | 98 | 255 | 1.57 (1.06-2.33)* | 1.62 (1.04-2.54)* |
| Desired number of children | Decided | 40 | 250 | 1 | 1 |
| | Not decided | 105 | 197 | 3.36 (2.24-5.05)** | 5.00 (3.05-8.20)** |
| *p-value < 0.05 **p-value < 0.01 | | | | | |

Table 4: Multivariable analysis of unmet need for FP in rural communities of Gonji Kolela district, Northwest Ethiopia, 2015

Discussion

The prevalence of unmet need for FP service was 23.8%, which is lower than the prevalence Enemay (25.6%), Belesa (35.9%), Butajira (32.4%), National (25%), eastern Nepal (26%) and East Delhi India (25.3%) [3,9,10-16]. This variation might be due to the difference in health service coverage and development of health development army network for increasing awareness of women on FP and maternal health service. However, it is higher than the study done in Bangladesh (22.4%) [11]. This disparity might be due to health service coverage and socio-demographic difference.

The contraceptive acceptance rate of this study was 73.3%; this is higher than Enemay (66.7%) and Kobo (38%) [15,16]. This difference might be due to increasing awareness of women in FP service, expansion of FP service by governmental sector, non-governmental organization and the private sector as static and outreach program.

This study revealed that women married before 18 years were more likely to have unmet need for FP. This study finding is similar with studies done in Enemay, kobo and SNNP [15,16,17]. At the same time age group 15-19 and 20-24 were more likely to have unmet need for FP. This finding was similar with studies done in kobo, SNNP, Oromia region, Benin, Nepal [3,13,15,18]. This might be due to age increase women may develop the maturity to decide their family size because these women become mature and increased awareness of the community on legal marriage (Marriage >18 years old) through health development army discussion.

Women's whose husband educational status is higher have a significantly low unmet need for FP. This finding was similar with studies done on Enemay and Butajira [13,16]. This might be due to Men's educational status is directly related to economic and social empowerment which increased exposure to resources such as access to media and utilization of desired health care delivery services. Moreover, education enabled men to have better knowledge on reproductive health which enable them to introduce couple's discussion to use family planning.

Discussion about FP issues with partners and health extension workers in the last 12 months prior to this study inversely associated with unmet need for FP. This is similar with studies done in Enemay, Belesa, Kobo, SNNP and Rwanda [14-16,18,19]. This is because the discussion with partner and health extension workers unwrap a way to decide the number of children and use of available FP methods. So this communications was important to decrease unmet need for family planning.

Decided desire numbers of children before the first pregnancy significantly decrease the unmet need for FP. This finding is supported by studies done in Enemay and Belesa [14,16]. This difference might be due to married women who decided the desired number of children

before first pregnancy were able to plan and manage the family size and use FP methods effectively.

The main reasons for not using FP methods were fear of side effects, health concerns, not aware of Contraceptive, no preferred method, husband's disapproval, infrequent sex and religion prohibition. This result was supported by the finding of studies Enemay, Belesa and Nepal [3,14,16].

Conclusion

The overall prevalence of unmet need for FP was high, specially unmet need for spacing. Age of respondents, respondents and their husband education status, age at first marriage, discussion with partners and health workers about FP issues in the last 12 months prior to study and desired number of children were independent predictors of unmet need for FP.

Barriers of unmet need for FP shall be explored qualitatively and awareness creation on the problem of early marriage, autonomy of husbands on family planning and clear discussion of women's with their husbands regarding family planning utilization and strengthening integrated adult education shall be taken in to consideration in the future.

Therefore, women should marry after at least 18 years and above to decrease unmet need. Health extension workers should strength discussion with women about husband-wife communication, deciding the number of children and the importance of FP services.

Declaration

Ethics approval and consent to participate

Ethical clearance was obtained from the ethical review committee of GAMBY collage of medical science. Permission to conduct the study was obtained from Amhara national regional state research and technology transfer core process and Gonji Kolela district health office. Informed consent was obtained also from each participant of the study.

Authors' Contributions

Alebel biadgie designed the study, conducting field work, analyzed data, interpreting finding and wrote the manuscript. Adane Nigusie, Simegnaw Handebo and Resom Berhe involved in the design, development proposal, assisted field work, in data analysis and manuscript writing. All authors of the manuscript have read and agreed to its content.

References

1. MOH (2006) National reproductive health strategy of 2006-2016. Federal Democratic Republic of Ethiopia, Ministry of Health. Addis Ababa, Ethiopia.
2. Westoff CH (2006) New estimates of unmet need and the demand for family planning. DHS comparative reports. USA
3. Choudhary S, Saluja N, Sharma S, Gaur D, Pandey S (2009) A study on the extent and reasons of unmet need for family planning among women of reproductive age group in rural area of Haryana. *J Health* 12: 4-10.
4. Klerman LV (2006) Family planning services: An essential component of preconception care. *Matern Child Health J* 10: 157-160.
5. Caldwell JC, Caldwell P (1990) Cultural forces tending to sustain high fertility. In *population growth and reproduction in sub-Saharan Africa*, Technical analysis of fertility and its consequences; World Bank, Washington DC, USA 199-214.
6. Singh S, Darroch J (2012) Costs and benefits of family planning services, New York: Guttmacher institute.
7. Bongarts J, Cleland J, Gupta MD (2012) Family planning programs for the 21st century. Population Council.
8. Central Statistical Agency (2014) Ethiopia mini demographic and health survey 2014. Addis Ababa, Ethiopia.
9. CSA, ICF M (2011) Ethiopia demographic and health survey” preliminary report. Central Statistical Agency, Addis Ababa, Ethiopia; MEASURE DHS, ICF Macro, Calverton, Maryland, USA.
10. Wado YD (2010) Reproductive preference and demand for family planning in oromia state, Ethiopia, University of Groningen.
11. Laya KS (2012) Prevalence and determinants of unmet need for family planning among women in india. *Res Soc Sci* 7: 59-70.
12. Ferdousi SK, Jabbar MA, Hoque SR, Karim SR, Mahmood AR, et al. (2010) Unmet need of family planning among rural women in Bangladesh. *J Dhaka Med* 19: 11-15.
13. Mekonnen W, Worku A (2011) Determinants of low family planning use and high unmet need in butajira district, south central Ethiopia. *Reprod Health J* 8:37
14. Mihret N (2008) Determinants of unmet need for contraception among currently married couples in west belessa woreda, north gondar of amhara, Ethiopia.
15. Molla G, Belete H (2011) Unmet need for family planning and its determinants among currently married women in Kobbo woreda, North-East of Amhara. *Ethiop J Reprod Health* 5: 2-9.
16. Dejen G, Ayichiluhm M, Abajobir AA (2013) Prevalence and associated factors of unmet need for family planning among married women in enemay district, northwest Ethiopia. *Global J Med Res* 13: 1-9.
17. Hailemariam A, Haddis F (2011) Factors affecting unmet need for family planning in southern nations, nationalities and peoples region, Ethiopia. *Ethiop J Health Sci* 21: 77-89.
18. USAID (2005) Perspectives on unmet need for family planning in west Africa, Benin” Accra, Ghana 15: 18.
19. Ndaruhuye DM, Broekhuis A, Hooimeijer P (2009) Demand and unmet need for means of family limitation in Rwanda. *Int Perspect Sex Reprod Health* 35: 122-130.