Demand for Family Planning among Voluntary Counseling and Testing women clients in Public Health facilities, Dawuro zone, south west Ethiopia: a cross sectional study

Thomas Tesfaye[1], * Fessahaye Alemseged[1], Haimanot Ewnetu[2]

[1]Department of Epidemiology, College of Health Sciences, Jimma University, Jimma, Ethiopia

[2]Department of Public Health, Saint Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia

Abstract

Background: The total demand for family planning is the sum of the percentage of women using family planning and the percentage of women with unmet need for family planning.Both unintended pregnancy and HIV infection can be protected by a number of ways. Access to HIV/AIDS services without access to Sexual and Reproductive Health services and vice versa can have adverse effects on community health and stop the progress of advances made against HIV/AIDS, unmet Family Planning need, and maternal mortality.In developing countries the provision of family planning services at voluntary counseling and testing settings is low. There is lack of information on demand for family planning among women voluntary counseling and testing clients in the study area. Therefore the study aimed to assess demand for family planning among voluntary counseling and testing clientwomen in South West Ethiopia.

Methods: Facility based cross sectional study was conducted on total of 401 respondents consecutively. Descriptive, bivariate and multivariable analyses were performed. Statistical significance was declared at a value of $p < 0.05$.

Result: Demand for family planning among voluntary counseling and testing women client was 71.5% in the study area. Marital status (AOR= 0.17; 95% CI: 0.04, 0.67), income level (AOR= 2.44; 95%CI: 1.34, 4.45) and live birth (AOR= 3.27; 95% CI: 1.35, 7.92) were predictors of demand for family planning.

Conclusion: The finding showed that majority of women voluntary counseling and testing clients had demand for family planning. Factors affecting demand for family planning was marital status, level of income and having given live birth. Hence, providing family planning services continuously at VCT settings is recommended.

Keywords: Family planning, Demand, Voluntary counseling and testing

Background

The total demand for family planning is the sum of the percentage of women using family planning and the percentage of women with unmet need for family planning(1). An individual's decision to approve a contraceptive method is based on whether they want a (another) child or not (2). Both unintended pregnancy and HIV infection can be protected by a number of ways. These dual protection behaviors include abstinence, monogamous couples using effective contraception, and correct and consistent condom use. Access to HIV/AIDS services without access to FP/SRH (Family Planning/ Sexual and Reproductive Health) services and vice versa can have adverse effects on community health and stop the progress of advances made against HIV/AIDS, unmet FP need, and maternal mortality (3). Although accomplishment of linkage of family planning and HIV/AIDS services may vary from one health facility to another, a continuum of possibilities exists for linking these services(4,5).HIV and family planning interventions have almost similar target audiences; for example, nearly half of HIV infected persons worldwide are childbearing-aged women. Offering these services together may maximize use of scarce resources, improve client access, increase uptake for both service types(6,7).

The process by which a person undergoes counseling which would enable him or her to make an informed choice about being tested for HIV is considered to be Voluntary Counseling and Testing (VCT) (8, 9). The primary aim of the VCT service is preventive which is helping people to change their sexual behavior especially to avoid transmitting HIV to sexual partners if sero-positive, and to remain sero-negative if tested negative (10).

Ethiopia is the second most populous country in Africa next to Nigeria having a population of nearly 88 million in 2014. Women of reproductive age make up about 45% of the female population and one-fifth of the total population of the country. Women in the country are characterized by high fertility - 4.1 children per woman. The population policy of the country aims to achieve a Total Fertility Rate (TFR) of 4 children per woman by 2015. One of the targets of the Ministry of Health of Ethiopia, with respect to improving maternal and child health, is to increase the contraceptive prevalence rate (CPR) to 66 percent by 2015(11,12). The HIV/AIDS policy and guidelines for voluntary counseling and testing for HIV in Ethiopia recommend that basic FP information and services should be incorporated into the VCT services for all clients regardless of their HIV sero status(7). The Health Sector Development Program (HSDP) IV of the country also recommends service integration, in particular FP-HIV prevention linkages through common messages and dual protection(13).More than 200 million women in the world with an unmet need for family planning comprise women who are HIV positive and those at risk of HIV. Both family planning (FP) and its integration with HIV programs have been overshadowed by donor emphasis on other urgent health issues, namely HIV, malaria and tuberculosis. This is especially true in sub-Saharan Africa where the HIV epidemic is most acute, fertility rates are high and modern contraceptive use is low(14). Even though providing family planning services in the VCT settings has benefits, insufficient information exists to describe the extent of demand for family planning in VCT settings. This study was intended to address the gaps in demand for and unmet need for family planning among VCT clients in the study area

Methods

Study setting and participants

A cross sectional study was conducted at the Public health facilities inDawuro zone, South West Ethiopia from February 20 - March 20, 2015.A sample of VCT client women in the age group of 15-49 years who were attending voluntary counseling and testing services during the study period were included for the quantitative study while VCT counselors and health facility managers are purposive included for in the qualitative interview.

Sampling size and sampling technique

Quantitative Study

The sample size was determined based on sample size calculation for single population proportions formula using Epi Info version 3.5.1.database and statistics software. Proportion of

sexually active VCT client women demand for family planning (86%) was considered. The health facilities were selected by using simple random sampling from the total Public health facilities in the zone. From these selected health facilities the calculated sample size was used to recruit study subjects based on the total number of VCT clients proportional to the facilities clients. To allocate the study subjects in the VCT centers proportionally, first the average numbers of clients who visit the VCT centers monthly during data collection period was estimated based on the previous monthly client flow of the units which was obtained by referring monthly report format and client registration book for a month prior to data collection. Based on the information obtained from each VCT centers, consecutive sampling was employed to identify study participants from each VCT centers.

Qualitative Study

For qualitative study an in-depth interview was conducted for seven VCT counselors and managers of the health facilities.

Data collection process

The quantitative data were collected by trained nurses working using a structured and pre-tested questionnaire. The questionnaire was originally designed in English; and then translated to local languages and back translated to English by other person to check for its consistency.Similarly, fourteen qualitative in-depth interviews were conducted and the interviews were tape recorded as well note was taken.

Data analysis

Quantitative: Data were coded, then entered and cleaned in Epidata and analyzed using SPSS version 16 statistical software. Both descriptive and inferential statistical techniques were employed. Bivariate analysis was done to test the association between the independent and the outcome variable. All explanatory variables that were associated with the outcome variable in bivariate analysis, at P-value of <0.25 were entered into multiple logistic regression model, to identify factors affecting demand for family planning. P-value of < 0.05 was considered as a cut-off point for statistical significance.

Qualitative data: The entire audio taped interview was transcribed and translated to English language. Transcripts were coded and thematic analysis approaches were used to summarize key findings on themes related to study phenomenon and to supplement the quantitative findings.

Result

Socio demographic characteristics of the Respondents

Of 407 women eligible for the study information was obtained from 401 women making a response rate of 98.5%. Two hundred fifty six (63.8%) of the respondent are from rural areas. More than half of the respondents 215(53.6%) are within the age group of 15 to 24 years with mean age for women was 24.88 with SD of ±5. Majority of the respondents were unmarried (48.6%), able to read and write (80%), house wives (23.4%) and the mean household income was 851.10 with SD of ±833.47 (table 1). VCT service providers and health facility managers from in depth interview reported that most of their VCT clients were young. According to one health facility manager in depth interview response *"...Most of our clients are young with age greater than 20 and below 30 years old and partners for pre-marital service".*

Table 1: Socio demographic characteristics of women VCT clients, Dawuro zone, March 2015 (n= 401)

Variables	Frequency	Percent
Age (years)		
15-24	215	53.6
25-34	127	39.2
>=35	29	7.2
Religion		
Orthodox	181	45.1
Protestant	197	49.2
Catholic	23	5.7
Ethnicity		
Dawuro	383	95.5
Amhara	9	2.2
Wolayita,konta&others	9	2.2
Educational status		
Literate	321	80
Illiterate	80	20
Residence		
Rural	256	63.8
Urban	145	36.2
Marital status		
Married	172	42.9
Unmarried	195	48.6

Widowed	11	2.7
Divorced	23	5.7
Work status		
Unemployed	57	14.2
Student	81	20.2
Government employee	71	17.7
Merchant	26	6.5
Farmer	23	5.7
Daily laborer	49	12.2
House wife	94	23.4
Family income/month		
<500	192	47.9
500-1500	153	38.2
>1500	56	14
Radio in HH		
Yes	263	65.6
No	138	34.4
Television in HH		
Yes	103	25.7
No	298	74.3

Reproductive and Obstetric Characteristics of the Respondents

More than half of the respondents, 207 (51.6%) had ever given live birth while 16(4%) were HIV positive and the rest 385(96%) were HIV negative. Among the HIV-negative women, a desire for a (another) child was 179(93.2%) for the unmarried whereas it was 128(79%) for the married. (table2).

Table 2: Reproductive and obstetric characteristics of respondents, Dawuro zone, March 2015(n= 401)

Variables	Frequency	Percent
HIV status		
HIV positive	16	4
HIV negative	385	96
Had ever given live birth		
Yes	207	51.6
No	194	48.4
Number of children		
No	195	48.6
1	61	15.2
≥2	145	36.2
Future child desire		

Yes	327	81.5
No	65	16.3
I don't know	9	2.2
Partner child desire		
Yes	254	63.3
No	37	9.3
I don't know	110	27.4

Health Service Related Factors

Only 50(12.5%) respondents reported that they were counseled for family planning methods by health professionals at the VCT settings. This has been supported by qualitative finding. One clinical nurse counselor explains, *"…If our VCT clients request to get family planning services, most of the time rather than counseling at VCT settings, intra facility referral to maternal and child health unit is made."*

A health facility manager from in depth interview also said,

"… The FP information could be provided by counselors but the service should be provided by FP provider".

One of the VCT counselors from in depth interview explained,

"…Our facility was providing short term FP methods such as pills and condoms for VCT clients at VCT room but interrupted currently because of the ongoing new construction in our compound which made the former room in which the services were provided to be detached from the old building and currently we do not have enough rooms to provide the services jointly".

Most of the counselors and managers from in depth interview said that it is possible to integrate both FP and VCT services. But practically the integration was weak due to inadequacy of rooms, VCT service providing rooms being far from FP service providing rooms, shortage of trained man power to deliver the services and most of the logistics for FP were found at MCH units rather than being available at VCT settings. Even though the organizational policy supports integration of FP with VCT services, it was weakly practiced in the facilities.

Concerning access to health facilities, 323(80.5%) clients live within 5 km distance from the health facilities. The main source of information about the VCT services for 248(61.8%) respondents was health facilities. Only 166(47.2%) of the respondents' male partners were tested and less than half, 164(46.3%) knew the status of their partner (table 3).

Table 3: Health service related factors among women VCT clients, Dawuro zone, March 2015

Variables	Frequency	Percent
Counseling on FP methods		
Yes	50	12.5
No	351	87.5
Distance of the facility from home		
≤ 5 km	323	80.5
> 5km	78	19.5
Partner HIV tested		
Yes	166	47.2
No	186	52.8
Know partner's HIV status		
Yes	164	46.3
No	190	53.7
Reasons for visiting VCT centers		
To know HIV status	288	72
In time of illness	11	2.8
Pre-marriage	48	12
In doubt	44	11
Other	9	2.2

Demand and Utilization of Family Planning Methods

Majority of the participants, 363(90.5%) have ever heard about any family planning methods and the main source of information 238(65.6%) were health facilities. Among current non users of FP methods, two hundred six (71.5%) have demand for family planning methods (table 4).

Among current users of FP methods majority of the respondents 52(46%) were current users of injectables. Most of the counselors and health facility managers from in depth interview also stated that those with demand for FP mostly needed short term FP methods. Result from in depth interview by one health facility manager is explained as follows,

"…Most of our VCT clients needed short term FP methods. Most of the VCT clients need to have a Depo-Provera. Some of the, particularly, the married ones prefer to have long term FP methods like implants. Women of reproductive age group mostly within the age group of 18 to 25 years seek to get the FP services".

All of the health service managers said that the extent of unmet reproductive health need of the clients was high. Most of the health service managers and counselors expressed they planned to integrate the VCT and FP services, but practically the integration was weak due to inadequacy of rooms, VCT service providing rooms being far from FP service providing rooms, shortage of trained man power to deliver the services and most of the logistics for FP were found at MCH units rather than being available at VCT settings. Findings from in-depth interview by one health facility manager *"...Advantages of offering FP services to VCT clients are: making easy accessibility and addressing the need of clients. The opportunities in linking the two services were presence of both services in the facilities and presence of supporting guidelines to integrate both services. The obstacles in linking the two services were poor intra facility referral and lack of attention from provider side".*

The unmet need for FP among women VCT clients was 206(64.6%), thirty two (10%) women with demand for FP had unmet need for limiting whereas 174(54.6%) of them had unmet need for spacing a child. The unmet need for FP among married women was 80(50.6%) and for unmarried ones it was 103(76.9%) (Table 4).

Table 4: Demand and Utilization of FP methods of respondents, Dawuro zone, March 2015

Variables	Frequency	Percent
Ever heard of FP methods		
Yes	363	90.5
No	38	9.5
Demand for FP methods		
Yes	206	71.5
No	82	28.5
Ever used FP methods		
Yes	217	54.1
No	184	45.9
Current users of FP methods		
Yes	113	28.2

No	288	71.8

Factors associated with Demand for Family Planning

During bivariate analysis marital status, status of birth, future child desire, age and monthly income level were associated with demand for Family Planning.

After adjustment for potential confounders, widowed women were less likely to have demand for FP compared to married (AOR 0.17; 95% CI: 0.04, 0.67). Women whose monthly family income was between 500 and 1500 ETB were two times more likely to have demand for FP (AOR 2.44; 95% CI: 1.34, 4.45) compared to those with monthly income of less than 500 ETB. Additionally women who had ever given live birth were three times more likely to have demand for FP than those who did not give live birth(AOR 3.27; 95% CI:1.35, 7.92) (Table 5).

Table 5: Factors independently associated withdemand for family planning in Dawuro zone (n= 288)

	Demand for FP			
Variables	Yes	No	COR 95% CI	AOR 95% CI
Marital status	N (%)	N (%)		
Unmarried	103(62.8%)	61(37.2%)	0.29(0.15, 0.56)**	0.62(0.25, 1.50)
Widowed	6(54.5%)	5(45.5%)	0.21(0.05, 0.78)*	0.17(0.04, 0.67)**
Divorced	17(89.5%)	2(10.5%)	1.48(0.30, 7.15)	1.34(0.26, 6.73)
Married	80(85.1%)	14(14.9%)	1.00	1.00
Age				
15-24 year	115(64.6%)	63(35.4%)	1.00	1.00
25-34	80(85.1%)	14(14.9%)	3.13(1.64, 5.97)**	1.72(0.72, 4.11)
>35	11(68.8%)	5(31.2%)	1.20(0.40, 3.62)	0.66(0.14, 3.77)
Income				
500-1500 ETB	92(80%)	23(20%)	2.21(1.25, 3.92)**	2.44(1.34, 4.45)**
>1500	22(73.3%)	8(26.7%)	1.52(0.63, 3.67)	1.37(0.53, 3.50)
<500	92(64.3%)	51(35.7%)	1.00	1.00
Ever given live birth				
Yes	105(85.4%)	18(14.6%)	3.69(2.04, 6.66)**	3.27(1.35, 7.92)**
No	101(61.2%)	64(38.8%)	1.00	1.00
Future child desire				
Yes	172(71.7%)	68(28.3%)	1.00	1.00
No	32(76.2%)	10(23.8%)	1.26(0.59, 2.71)	0.83(0.32, 2.18)
Don’t know	2(33.3%)	4(66.7%)	0.19(0.03, 1.10)	0.13(0.01, 1.02)

Discussion

This facility based study used information from women of reproductive age voluntary counseling and testing clients to determine demand for family planning, unmet need for family planning and attempted to assess factors associated with demand for FP and unmet need of FP in Dawuro zone. In addition to this information was obtained from VCT service providers and managers of the health facilities to supplement the information obtained from clients. Consequently factors influencing demand for FP and unmet need for FP were identified in the zone.

In our study the HIV prevalence was 4% which is lower than the finding of studies done in Kenya in which 8% of women VCT clients were HIV positive (15). Among the HIV-negative women, desire for a (another) child was higher for the unmarried which was 93.2% compared to the married which is 79%. On the contrary, a desire for a (another) child was higher for the married (70%) compared to the unmarried, 66.7% in case of HIV positive clients. which is consistent with a study done in Uganda (16). This is explained by the fact that most of unmarried HIV negative women do not have a child and their desire to have a child is higher than that of married counterparts. Whereas unmarried HIV positive women fear the risk of transmission of HIV to their infant when they become pregnant and give birth since they fear stigma and discrimination.

In our study demand for family planning among women voluntary counseling and testing clients was found to be 71.5%. This finding is higher than the study done in Tanzania which showed that 60% of women VCT clients needed to get family planning services at health facilities but it is lower than the study done in North east Ethiopia which was 86% (15, 17,18). The differences might be explained by socio cultural, health facility factors and differences in the study setting. Similarly, the demand for FP among married women was 91.9%, which is higher than their counterparts (68.7%), and the finding of similar studies(17,19) as married women have better information and awareness due to their exposure to health facilities.

In our finding few numbers of unmarried or divorced women were using contraceptives whereas 49.4% of the married ones were using contraceptives. This finding came to be higher than the finding of mini EDHS of Ethiopia in which the contraceptive prevalence of the country among

married women was 42% and in SNNPR 39% of married women were current users of FP methods in 2014(12). The possible explanation for this might be that married women get information on FP methods through free discussions made with their friends, neighbors, partners and their readiness to visit health facilities. Also the married women are with high incidences of sexual activities compared to unmarried women or divorced women. The difference with the finding of the EDHS report might be due to difference in reference population.

The unmet need for FP among HIV positive women was 68.2% which is lower than the findings obtained from studies done in Uganda, 75%, but higher than studies conducted in north east Ethiopia, 62% (18, 20). These differences might be due to the fact that differences in socio cultural and health service related factors. On the contrary, the unmet need for FP among HIV negative women was 64.4% which is high compared to studies conducted in Uganda (34%) and north east Ethiopia (53%)(18,20). This difference might be due to the fact that the difference in health service related factors particularly counseling and provision of FP service being low in the study area.

The finding indicates that that injectables were used by 46% of contraceptive users which is consistent with studies done in Ethiopia, South Africa and Rwanda (21). This might be due to the fact that most women prefer the short term FP methods thinking the long term methods are with more side effects than the short term methods. In this study 84% of the respondents supported the presence of FP services at VCT settings but only 12.5% of the clients were counseled for FP methods at VCT settings which is much lower than a study done in Tanzania (15). This might be due to the fact that focus to integrate both services was being lower and provision of the two services being separate.

On the other hand, women with family monthly income between 500 ETB and 1500 ETB were two times more likely to have demand for FP than those with family monthly income less than 500 ETB. This finding is consistent with findings obtained from studies conducted in Rwanda in which women from the wealthiest households and women who were married to craftsmen or men with mid-level salaries were more likely than women from poorer households to have a demand for family planning (22). This might be due to the fact that women with higher family

income strive to work hard so that they try to increase their house hold income by limiting the number of children to be born. Widowed women were less likely to have demand for FP than the married ones as they might consider themselves at low risk to get pregnant. Additionally, women who had ever given live birth were three times more likely to have demand for FP than their counterparts which is probably due to the achievement of desired number of children among the former group.

Conclusion

Generally, majority of women VCT clients had demand for Family Planning. Marital status, family income and status of birth were found to be associated with demand for family planning. Even though majority of the respondents needed the FP services to be provided at VCT settings, very few of them got the service through intra facility referral. Although most of service providers and health facility managers supported the integration of FP and VCT services, they were not ready to provide the services simultaneously. Policymakers should take steps towards integration of FP services along with VCT services and need to monitor and evaluate the continuous provision of the services.

Abbreviations: EDHS, Ethiopian Demographic Health Survey; ETB, Ethiopian Birr; FP, Family Planning; HIV/AIDS, Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome; SD, Standard Deviation; SNNPR, Southern Nations Nationalities and Peoples Region; VCT, Voluntary Counseling and Testing

Declarations

Ethics approval and consent to participate

Ethical Clearance was obtained from Ethical Review Committee of College of Health Sciences, Jimma University and verbal consent was taken from all the study participants.

Authors' contributions

TT conceived and designed the study and collected data in the field, performed analysis, interpretation of data and reviewed the manuscript. FA assisted with the design, interpretation of data and the critical review of the manuscript. HE assisted with the design, interpretation of data and drafts the manuscript. All authors approved and read the final manuscript. All authors participated in critical appraisal and revision of the manuscript.

Acknowledgement

We acknowledge Jimma University for financing the study. We thank all participants for devoting their time to take part in this study.

References

1. United Nations, Department of Economic and Social Affairs, Population Division. World Contraceptive Use (POP/DB/CP/Rev2012)). ; 2012.
2. UNFPA, PATH. Meeting the need, strengthening family planning programs. ; 2006.
3. Pathfinder International. Integrating SRH and HIV/AIDS Services: Pathfinder Internationa's Experience Synergizing Health Initiatives; 2005.
4. Rose W., Erika M. Integrating Family Planning and Voluntary Counseling and Testing Services in Ghana. A Rapid Programmatic Assessment, Family Health International. ; 2004.
5. USAID. Rapid Assessment on Policy and Operational Barriers to The Integration of FP/RH/HIV Services in Kenya. ; 2009.
6. USAID. Integration of HIV and Family Planning Health Services in Sub-Saharan Africa: A Review of the Literature, Current Recommendations, and Evidence from the Service Provision Assessment Health Facility Surveys Maryland, USA: ICF International Calverton; 2012.
7. Federal Democratic Republic of Ethiopia Ministry of Health. National Guideline for Family Planning Services in Ethiopia; 2011.
8. Korra A., Bejiga M., Tesfaye S.,. Socio demographic profile and prevalence of HIV infection among VCT clients in Addis Ababa. Ethiop. J. Health. 2005; 19(2).
9. Julie A., Denison, George P. Schmid, E. Kennedy and Michael D. Sweat. HIV Voluntary Counselling and Testing and Behavioral Risk Reduction in Developing Countries: A Meta-analysis, 1990-2005. AIDS Behav. 2008; 12: p. 363-373.
10. Misganaw A, Melkamu Y. Linkage between VCT and reproductive health services(FP, ANC and delivery) in two public facilities of rural Ethiopia. Ethiop.J.Health Dev. 2008; 22(2): p. 158-166.
11. UNFPA. A Decade of Change in Contraceptive Use in Ethiopia: In Depth Analysis of the EDHS 2000-2011. Addis Ababa:; December 2012.
12. CSA, MOH. Ethiopia Mini Demographic Health Survey Addis Ababa; July 2014.
13. Federal Democratic Republic of Ethiopia Ministry of Health. Health Sector Development Program IV 2010/11 – 2014/15 FINAL DRAFT. ; October 2010.

14. Strachen M., Agarwal K. Analysis of Family Planning Content in HIV/AIDS, VCT, and PMTCT Policies in 16 Countries. ; January 2004.
15. Bayoum A., Beati M., Florence T., Zubeda N. Assessing the need and capacity for integration of Family Planning and HIV counseling and testing in Tanzania. Pan African Medical Journal. 2012; 13(Supp 1)(6).
16. Fredrick M., Gertrude N., Tom L.,Joseph K.i, Joseph K., Joseph S., Absalom S., et al. Use of HIV-Related Services and Modern Contraception among Women of Reproductive Age, Rakai Uganda. African Journal of Reproductive Health. 2010 December; 14(4): p. 91-102.
17. Central Statistical Agency, ICF International. Ethiopia Demographic and Health Survey 2011 Addis Ababa, Ethiopia, Calverton, Maryland, USA; 2012.
18. Engender Health Ethiopia. Demand for family planning among women VCT clients in Northeast Ethiopia : The Need for Integration, International conference on Family Planning: Research and Best Practices. In ; November 2009; Kampala , Uganda.
19. Ali A. and Okud A. Factors affecting unmet need for family planning in Eastern Sudan. BMC Public Health. 2013; 13(102).
20. Jhangri G., Heys J., Alibhai A., Rubaale T., Kipp W. Unmet need for effective family planning in HIV-infected individuals: results from a survey in rural Uganda. J Fam Plann Reprod Health Care. 2012; 38: p. 23-29.
21. Family Health International, USAID. Study of Family Planning and HIV Integrated Services in Five Countries Final Report. ; 2010.
22. Dieudonné M., Annelet B., Pieter H. Demand and Unmet Need for Means of Family Limitation in Rwanda. International Perspectives on Sexual and Reproductive Health. 2009 Sep.; 35(3): p. 122-130.