

Original Research Article

# Factors Affecting the Use and Sustainability of Community Based Reproductive Health Programs among Rural Women of Two Catchment Areas of W/Gojjam, North West Ethiopia

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## ABSTRACT

A comparative cross sectional study was carried out among women of reproductive age group in rural West Gojjam zone to assess factors affecting the use of community based reproductive health program (CBRHP) and its sustainability. The study was conducted in four peasant associations of the zone taking successful and weak/failed program areas. Both quantitative and qualitative approaches were employed for data collection. The qualitative method included key informants interview (with program coordinator and health professionals), and Focus Group discussions with community-based reproductive health agents (CBRHAs). A multistage sampling technique was employed to select 408 study subjects for the study. Descriptive statistics, multivariate analysis and logistic regression analysis were used for data analysis. Odd ratio, Chi-square, 95% confidence interval and p-value were used for statistical significance value. The results indicated that about 98.53% of respondents know at least one Modern Contraceptive Methods (MCM) in successful as compared to 88.23% in weak program areas. The proportions of women who were using MCM (94.12% & 52.45%) & attended antenatal care service at least once (42.65% & 18.34%) were found to be Statistically significant in Successful than weak program areas respectively. Attitude and knowledge of the women, interpersonal communication by the agents, the service and level of support were found to be the major factors affecting the women use of CBRHP. Almost all the reproductive health programs given at the community level were given before the birth of the child (prenatal), too low postnatal services for given for women after birth.

**Keywords:** Reproductive Health, Sexual Transmitted disease, Modern Contraceptive methods, Community Based Reproductive Health Program.

## INTRODUCTION

Reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system and to its function and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are

the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of using reproductive health programs of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and child birth and provide couples with the best chance of having a healthy infant (Turmen, 1995)

Women's health status is affected by complex biological, social and cultural factors, which are interrelated and only can be addressed in a comprehensive manner. Reproductive health is determined not only by the quality and availability of health care, but also by socio-economic development levels, lifestyles and women's position in society, attitude & knowledge towards (Thomas, 2004).

According to Thomas (2004) Special efforts should be made to emphasize women's shared responsibility and promote their active involvement in responsible parenthood, sexual and reproductive behavior, including family planning; maternal and child health; prevention of STIs, including HIV; ... shared control and contribution to family income, children's education, health and nutrition; and recognition of the equal value of children of both sexes. Male responsibilities in family life must be included in the education of children from the earliest ages. Special emphasis should be placed on the prevention of violence against women and children.

The dimension of reproductive ill-health encompasses problems such as female genital cutting (FGC), malnutrition, anemia, abortion, reproductive tract infections (RTI) including sexually transmitted infections (STD) and HIV/AIDS, infertility, unregulated fertility, maternal morbidity and mortality, sexual and gender violence and other related problems (Daniel, 2002).

Ethiopia is the third most populous country in Africa with high population growth rate and fertility rate. As the primary health service coverage is quite low, the large proportions of the population do not have access to both general health and reproductive health services (Central Statistical Authority, 2005).

#### **OBJECTIVES OF THE STUDY**

**General Objective:** To explore factors affecting the use and sustainability of

community-based reproductive health programs among rural women of two catchment areas of w/Gojjam, North West Ethiopia.

#### **Specific Objectives**

- To assess communities /women knowledge and attitude towards the program and extent of their participation in the program.
- To see the reproductive (RH) characteristics of successful and weakly performing CBRHP
- To identify the factors positively contributing to or negatively affecting the success of CBRHP.
- To identify factors that affect the use of women in community based reproductive health programs.
- To identify the delivery of integrated reproductive health services by the CBRHAs
- To assess the level of support provided by responsible health workers, working in government health facilities, in backing the program.

**Research Design and Methodology:** This research was design in comparative cross sectional study, which was compared weak/failed CBRHP areas versus successful CBRHP areas of women's using community based reproductive health program. Both qualitative and quantitative approaches were employed.

**The Study Area:** The study was conduct in W/Gojjam Administrative Zone of the Amhara National Regional state. The current capital of the zone, Finoteselam is located 387 Kilometers north west of Addis Ababa along the high way that extends from Addis to Bahir-Dar. West Gojjam was selected among the CBRHP implementing zones due to availability of comparable areas which fulfill the selection criteria. Two districts, one from the successful implementing areas and the other from the weakly performing/failed areas, were selected based on the set

criteria which were developed using the information obtained from the RHB.

Based on the 2012 Census conducted by the central statistical agency of Ethiopia (CSA), W/Gjama Zone had a total population of 2,106,596, of whom 1,058,272 were men and 1,048,324 women; with an area of 13,311.94 square kilometers. Mirab Gojjam had a population density of 158.25 and 184,703 or 8.77% were urban inhabitants. A total of 480,255 households were counted in this Zone, which resulted in an average of 4.39 persons to a household, and 466,491 housing units.

Six woredas namely, Jabi-Tenan, Bure woberma, Quarit, dembecha, sekela and degadamot were selected from the rest of fourteen woredas in the zone through stratified sampling. There are about 288035 people in Jabi-Tenan, 194838 in Quarit, 131790 in dembecha, 185547 in degadamot, and 122172 in sekela woreda (2012 Census).

**Study Population:** The study population were women in the reproductive age group (15-49 years) residing in the selected districts (woredas).

**Sampling Procedure:** Multistage sampling techniques were employed to select study subjects. Six woredas namely, Jabi-Tenan, Bure woberma, Quarit, dembecha, sekela and degadamot were selected from the rest of fourteen woredas in the zone through stratified sampling. Among the six woredas three were relatively successful and the recent three were relatively weak in performing Community based reproductive health program (CBRHP). Two woredas, one from each stratum were selected through simple random sampling technique. In each woreda two kebeles (peasant associations) were selected by simple random sampling method from 38 kebeles in the most successful woreda & 28 kebeles in weak areas. The numbers of households to be included in the study in each kebele were determined using

Proportional allocation method based on the population size of each kebele. In each kebele households were identified using systematic sampling method followed by simple random sampling method. In each household, one woman in the reproductive age group was enrolled in the study. If there were more than one eligible in the same household, one was selected by lottery method. In case there was no eligible in the selected household the nearest/next household were taken for the study.

**Selection criteria**

- Successful CBRHP areas- These were woredas or kebeles with a contraceptive prevalence rate of 15% or more and percent of active CBRHA > 60%.
- Weak CBRHP areas- These were woredas or kebeles with a contraceptive prevalence rate of less than 8% and percent of active(functional) CBRHA < 30%.

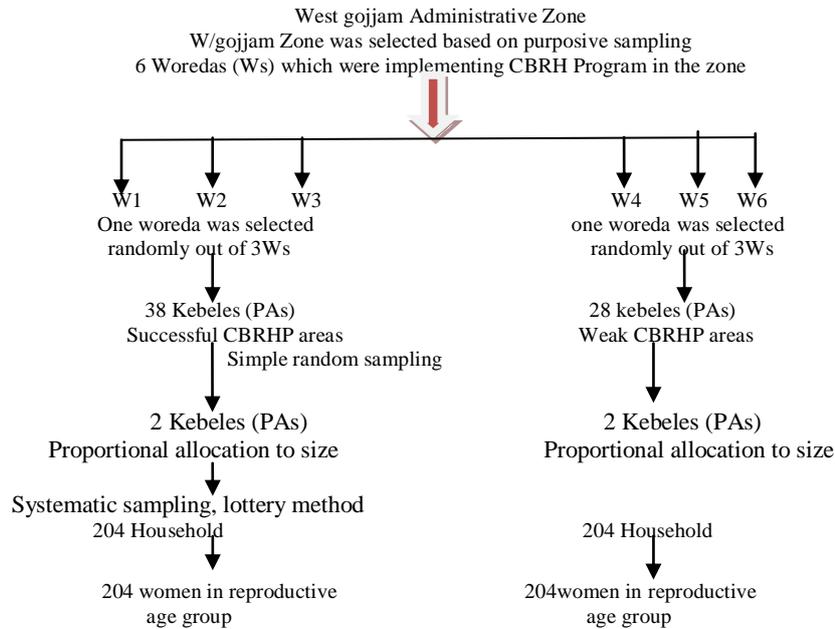
The cut-off points for the criteria have taken into consideration the project office and the RHB definition of successful and weak implementation of the program activities in the project area.

**Variables:** The independent variables include socio-demographic characteristics of the study subjects, knowledge and attitude towards reproductive health, the nature of the service the women get from health centre, the influence of men and the interaction between the health workers and the beneficiaries whereas the dependant variable is use of reproductive health programs at community level and reproductive characteristics of the women.

**Data Collection Instruments:** There was a deep conviction that there was merit in using more than one instrument as they supplement each other to generate credible data. Accordingly, the researcher was employed questionnaires, interview, and Focus Group Discussion as tools of requisite information source.

**Data Entry and Analysis:** Data was entered into a computer using SPSS, version 15 statistical programs /soft ware. Descriptive analysis to detect associations using cross tabulations was performed. Multiple variant analyses were used to identify that independent variables have a factor on dependent variable. Odd ratio

was used to assess the association where as Chi-square, 95% confidence interval and p-value were used for statistical significance value. Logistic Regression analysis was done to see the relative effects of selected independent variables on the dependant variables.



**Key: - PAs- Peasant Associations**  
**W - Woredas (districts) of the study zone**  
*Fig. 1. Sampling procedure of the study subjects*

## RESULTS

As the table shows, majority of the study subjects 181(88.72%) in successful area and 125(61.27) in the weak areas were between 20-30 years of age. The mean ages are 35(SD 8) and 34 (SD7.73) in the successful and weak areas respectively. Majority of the study subjects 202(99.01%) in the successful and 201(98.53) in the weak areas were Orthodox religious followers.

The majority of the study women are currently married; of which 179(87.75%) were in the successful and 183(89.71%) in the weak areas. Regarding Occupational status, most of the study subjects were housewives 134(65.69%) in successful and 142(69.61%) in weak areas.

Among the Socio-demographic characteristics, only education was found

to indicate statistically significant difference in its distribution between the two study areas ( $\chi^2= 13.67$ ,  $P= 0.01$ ). Nevertheless, majority of the respondents were illiterate in both areas; 122(59.80%) in the successful and 176(86.27%) in the weak program areas.

The average number of pregnancies woman had was found to be 3.34 SD+2.48, and 3.29 SD + 2.53 in Successful and weak program areas respectively. This difference was not statistically significant. The average number of currently alive children a woman has was found to be 3.34 + 1.98 in successful and 3.22 + 1.99 in weak program areas which was not statistically significant difference. Among those women who had history of pregnancy,

22(10.94 %) in successful 43(21.18%) in weak areas had history of unwanted pregnancy. History of induced abortion among those women, who had abortion,

was found to be 3.08 % in successful and 4.48% in weak program areas which was also not statistically significant difference.

**Socio-demographic characteristic of successful and weak/failed CBRHP areas**

Variable	Successful CBRHP Areas N (%)	Weak CBRHP Areas N (%)	$\chi^2$	p-value
	N=204(100)	N=204(100)		
<b>1. Age</b>				
Below 20	15(7.37)	42(20.59)	10.72	0.057
20-25	66(32.35)	67(32.84)		
26-30	115(56.37)	58(28.43)		
31-35	8(3.92)	14(6.86)		
36-40	4(1.96)	12(5.88)		
40+	2(0.98)	11(5.39)		
Mean + SD	35 + 8	34 + 7.73		
<b>2. Marital Status</b>				
Married	179(87.75)	183(89.71)	7.4	0.06
Divorced	3(1.47)	13(6.37)		
Widowed	2(0.98)	5(2.45)		
Single	7(3.43)	3(1.47)		
<b>3. Religion</b>				
Orthodox	202(99.01)	201(98.53)	0.2	0.65
Islam	2(0.9)	3(1.47)		
<b>4. Level of Education</b>				
Illiterate	122(59.80)	176(86.27)	13.67	0.01
Read & write	76(37.25)	21(10.29)		
Formal Education (2 – 8)	6(2.94)	3(1.47)		
<b>5. Occupation</b>				
Farmers	31(15.20)	49(22.55)	1.83	0.23
Housewives	134(65.69)	142(69.61)		
Local drink sellers	5(2.45)	6(2.95)		
Students	25(12.24)	1(1.3)		
Other	5(2.45)	6(0.49)		

**Reproductive characteristic of successful and weakly performing CBRHP areas**

Variable	Successful CBRHP Areas N (%)	Weak CBRHP Areas N (%)	$\chi^2$	p-value
	N=204(100)	N=204(100)		
<b>No. of pregnancies</b>				
0	18(8.62)	54(13.6)	4.462	0.347
1-3	84(41.18)	74(36.27)		
4-6	78(38.23)	14(6.86)		
7-9	14(6.86)	53(13.4)		
10+	8(3.92)	9(4.41)		
Mean + SD	3.34 + 2.48	3.29 + 3.53		
<b>Currently alive children</b>				
0	N=141 4(2.83)	N=185 2(1.08)	5.46	0.141
1-3	83 (59.29)	62(33.51)		
4-6	33(23.40)	96(51.89)		
7+	18(12.77)	25(13.51)		
Mean + SD	3.34 + 1.98	3.22 + 1.99		
<b>unwanted pregnancy</b>				
Yes	N=201 22(10.94)	N=203 43(21.18)	1.27	0.18
No	179(89.05)	160(78.82)		
<b>History of Abortion</b>				
Yes	N=141 56(39.71)	N=185 64(34.59)	0.16	0.705
No	85(60.28)	121(65.41)		
Abortion	N=65	N=67		
Induced	2(3.08)	3(4.48)		
spontaneous	63(96.92)	64(95.52)		

**Comparison of knowledge, attitude, and practice of using MCM between successful and weak CBRHP areas**

Variable Areas N (%)	Successful CBRHP Areas N (%) N=204(100)	Weak CBRHP N=204(100)	OR (95% CI)	$\chi^2$	p-value
<b>Knowledge of MCM</b>					
Yes	201(98.53)	180(88.23)	2.25 (1.47, 3.67)		
No (Ref)	3(1.47)	24(11.76)	1.00		
<b>Knowledge of specific MCM</b>					
	N=202	N=198		20.28	0.001
Depo	201(99.50)	124(62.63)			
Pills	155(76.73)	62(31.31)			
IUCD	16(7.92)	3(1.52)			
Condoms	101(50)	58(29.29)			
Others (Norplant, Tubal ligation, Vasectomy)	56(6.3)	9(4.55)			
<b>Ever use of MCM</b>					
	N=204	N= 204			
Yes	192(94.12)	107(52.45)	2.14 (1.44, 3.19)		
No (Ref)	12 (5.88)	97(47.45)	1.00		
<b>Current use of MCM</b>					
	N=204	N= 204			
Users	106 (51.96)	89(43.63)	2.01 (2.02, 6.26)		
Non users (Ref)	98 (44.08)	115(56.37)	1.00		
<b>Use one's choice of contraceptives</b>					
	N=58	N=18			
Using Choice	36(62.07)	9(50)	1.64 (2.50,5.40)		
Not using choice(Ref)	22(37.93)	9(50)	1.00		
<b>Reasons for not using ones' choice of contraceptives</b>					
	N=22	N=9		2.61	0.272
Couldn't get choice from CBRHA	13(59.1)	5(55.6)			
Couldn't get choice from Health centre/ Health post	7(31.8)	3(33.3)			
Other (private pharmacies or drug vendors)	2(9.1)	1(11.1)			
<b>Contraceptive supply Problems</b>					
	N=92	N=49			
Ever encountered	26(28.26)	34(69.39)	5.75 (2.53, 13.25)		
Never encountered (Ref)	66(71.74)	15(30.61)	1.00		
<b>Husband approval of contraceptive use</b>					
	N=114	N=125		1.70	0.193
Yes	109(99.61)	99 (79.2)			
No	5(0.39)	26(19.8)			

Knowledge of MCM was 98.53% in successful and 88.23% in weak program areas which was statistically significant difference at estimated odd ratio [(95% CI) =2.25 (1.47, 3.67)]. Concerning knowledge of specific MCM there was statistically significant difference between the two areas ( $\chi^2 = 20.58$ ,  $P=0.001$ ).

The difference in ever use of MCM, 94.12% of study subjects in the successful and 52.45% in the weak areas, was statistically significant at estimated odd ratio [OR (95%CI) = 2.14 (1.44, 3.19)]. The current use of MCM, 51.96% of the women in successful and 43.63% in weak program areas, was statistically significant difference at estimated odd ratio [(95%CI) = 2.01(2.02, 6.26)]. The majorities of the women who are currently using MCM are taking depo and pills

(99.50 & 62.63 % and & 76.73 31.31 % in successful and the weak program areas respectively. The difference was statistically significant at sig. value 0.001. Among these current MCM users, 37.93% in successful and 50% in the weak program areas are not using their choice of contraceptives. The difference was not statistically significant. The major reason for not using one's choice of MCM was inability to get one's choice from CBRHAs, 59.1% and 55.6%, and from public health center /Health post 31.8% and 33.3%, in successful and weak areas respectively responded that there is no Health post which fulfill our interest. The odds of encountering contraceptive supply problems among ever users of contraceptives, 28.26% in successful and 69.39% in weak program areas, is almost

six times higher in the weak program area as compared to the successful program area (OR= 5.75 95%CI 2.53,13.25).

Husband knowledge and approval of contraceptive use among current users of contraceptives, 99.61% in successful and 79.2 % in weak program areas, was found to be high & have no significant difference ( $\chi^2 = 1.70$  P= 0.193).

87(42.65%) of the study women in successful program areas have attended Antenatal care (ANC) during the last pregnancy at least once as compared to 18.34% in weak program areas which was

a significant difference at the estimated odd ratio [OR(95% CI)=1.74(1.10, 2.76).

The main reasons for not attending ANC, lack of awareness of the benefit 87.72% in successful and 40.95% in weak, did not want the service 17.54% and 33.43, unavailability of service or health facility in the nearby 12.28% and 20%, not knowing that such service was given in vicinity 12.28% and 45.71%, in successful and weak program areas respectively. The difference was found to be statistically significant ( $\chi^2 = 11.35$ , P= 0.021)

**Comparison of Maternal Health care service utilization & reasons for not-use between successful & weak CBRHP areas.**

Variable Areas N (%)	Successful CBRHP Areas N (%)	Weak CBRHP Areas N (%)	OR CI=95	$\chi^2$	p-value
<b>ANC attendance</b>	N=204(100)	N=204(100)			
Attended	87(42.65)	37(18.34)	1.74 (1.10, 2.76)		
Not Attended (Ref)	17(57.35)	167(81.86)	1.00		
<b>Reason for not attending ANC</b>	N=114	N=105			
Unaware of such service provision in vicinity	14(12.28)	48(45.71)		11.35	0.021
Unaware of the Benefit	100(87.72)	43(40.95)			
Unavailable nearby service	14(12.28)	21(20)			
Did not want the Service	20(17.54)	33(33.43)			

**Comparison of knowledge to HIV/AIDS and STD of CBRHP areas**

Variable	Successful CBRHP Areas N (%)	Weak CBRHP Areas N (%)	$\chi^2$	p-value
<b>Awareness to HIV/AIDS</b>				
Aware	199(97.54)	174(85.29)	0.10	0.651
Not aware	5(2.45)	30(14.70)		
<b>Transitions of HIV</b>				
Sexual intercourse	203(99.51)	200(98.04)	21.01	0.001
Mother to child	27(13.23)	6(2.94)		
Blood, or blood products	89(43.63)	76(37.25)		
Unsterilized instruments and sharp objects	201(98.53)	136(66.67)		
Sharing Household utensils	1(0.49)	30(14.71)		
Mean + SD	1.04 (0.86)	1.01 (0.97)		
<b>Prevention of HIV</b>				
Abstinence	203(99.51)	202(99.02)		
Be faithful	202(99.02%)	201(98.53)		
Using condom	87(42.65)	13(6.37)	17.09	0.010
Use sterile sharp instruments	79(38.72)	178(87.27)		
Avoid sharing of house hold Utensils	2(0.98)	19(9.31)		
Mean + SD	2.01(SD 1.03)	1.90 (SD 1.12)		
<b>Knowledge of diseases transmitted sexually</b>				
Knows	201(98.53)	176(86.27)		
Do not know	3(1.47)	28(13.72)		
<b>Knowledge of specific STD</b>				
Syphilis	97(47.51)	123(56.1)		
Gonorrhoea	86(42.16)	78(7.38)		
Others (LGV, chancroid..)	2(0.98)	3(1.47)		
<b>Knowledge of prevention methods of STD</b>				
Abstinence	89(43.63)	98(48.04)		
Be faithful	189(92.64)	186(91.18)	3.17	0.001
Use condom	87(42.65)	10(4.90)	5.10	0.165
Other	3(1.47)	2(0.98)	5.90	0.207

The majority of the study women 97.54% in successful and 85.29% in weak program areas has heard about HIV/AIDS. The major sources of information about HIV/AIDS are friends & neighbors, followed by health workers, public meeting places (church, burial, market), and mass media (radio & newspaper) in both places. There was no statistically significant difference between the distributions of sources of HIV/AIDS information.

The mean scores for HIV/AIDS knowledge of transmission routes were 1.04 (0.86) and 1.01 (0.97), and for prevention methods 2.01(SD 1.03) and 1.90 (SD 1.12) for successful and weak program areas respectively. The difference was statistically significant ( $X^2 = 21.01$  P= 0.001).

Concerning STDs, 98.53% in successful and 86.27% in weak program areas knows at least one sexually transmitted disease other than HIV. The difference was statistically significant ( $X^2 = 3.17$  P= 0.001).

The most commonly mentioned STDs were Syphilis, 47.51% and 56.1%, Gonorrhoea, 42.16% and 7.38%, and Others (Lympho granuloma venereum (LGV), chancroid...) 0.98% and 1.47%, of respondents in successful and weak program areas respectively.

Concerning knowledge of prevention methods of STDs, most of the respondents, 92.64% in successful area and 91.18% in weak program area, mentioned being faithful or limit to one partner primarily. The other preventive methods mentioned were abstinence by 43.63% respondents in successful and 48.04% of respondents in weak program areas. Only few study women, 42.65% in successful and 4.90% in weak program areas stated use of condom as a way of preventing the disease.

Most respondents, 94.11%, in the successful program area know the presence of a CBRHA in their village as

compared to 78.43% in the weak program areas. This difference was statistically significant at estimated odd ratio [OR = 2.52 95% CI (1.54, 3.06)].

The participation of the communities in the selection process of the CBRHA was found to be low in areas, 31.86% and 13.24% in successful and weak program areas respectively. However, the difference was significant at estimated odd ratio [OR (95% CI) = 3.16 (1.22, 9.26)].

Acceptance of the CBRHA, 93.53% and 40.59%, and ever talk with the CBRHA about reproductive health, 57.84% and 43.14%, in successful and weak program areas respectively, were found to have statistically significant difference at estimated odd ratio [OR = 5.06 95%CI (3.32,7.97), OR = 5.65 95%CI (3.57,11.43) respectively].

It was also found out that significantly higher proportion of women have received at least one type of service from the CBRHA in the successful program area 60.78% as compared to 54.90% in the weak program area [OR( 95% CI) = 3.91 (3.20,6.57)].

Information and Education about Reproductive health was the dominant topic of education among the list of services to be provided by the CBRHA in both areas. Among respondents who received service from the CBRHA, 28.79% 8.59 in successful & 8.59% of study subjects in weak program areas received IE about Reproductive health which was not a significant difference.

Provision of contraceptive materials 15.91% and 5.05%, advice on what to do during pregnancy, 15.4% and 3.53%, Information, Education or Counseling on STI, & HIV/AIDS, 10.35% and 2.02%, referral to a nearby health facility for RH problems or choice of contraceptives, 9.6% and 3.03% of study women in successful and weak program areas respectively, did not show statistically significant difference between

the two areas.

The likely of being willing to work as a CBRHA if selected by the community is almost twice higher in successful area, 75%, compared to, 43.14%, in weak program area [OR(95%CI)= 1.72 (1.19,2.37)]. The knowledge of a CBRHA dropout by the respondents in their locality was lower in successful, 10.29%, than in the weak program areas, 31.68% and this difference was significant [OR(95%CI)= 0.29 (0.17,0.48)]. The major reasons for CBRHAs' dropping out from rendering the service as mentioned by the study women are private work load, lack of beneficiary

of the service, and lack of payment or other benefit from the service/program.

Satisfaction of the study women by the CBRHS was found to be higher in successful 55.39% than in weak program areas 37.25% which was a significant difference at estimated odd ratio [OR (95%CI) =6.98 (4.86, 10.03)]. The major reasons mentioned for dissatisfaction are lack of choice of contraceptive methods, inadequate or total absence of information, education and counseling or other RH services, and lack of confidence on the CBRHA.

**Comparison of knowledge, attitude and practice of Community based reproductive health services in successful and weak CBRHP areas**

Variable	Successful CBRHP areas N(%)	Weak CBRHP areas N (%)	OR (95% CI)
<b>Awareness to the presence of CBRHA in the village</b>	N=204	N= 204	
Yes	192(94.11)	160(78.43)	2.52 (1.54,3.06)
No (Ref)	12(5.88)	44(21.57)	1.00
<b>Participation in selection of CBRHA</b>			
Yes	65(31.86)	27(13.24)	3.16 (1.22,9.26)
No (Ref)	139(68.14)	177(86.76)	1.00
<b>Acceptance of the CBRHA</b>	N=201	N= 202	
Accepted	188(93.53)	82(40.59)	5.65 (3.57,11.43)
Not accepted (Ref)	13(6.47)	56(27.72)	1.00
<b>Services to be provided by the CBRHA</b>			
IE	59(28.79)	8.59	0.29 (0.34,1.70)
Provision of contraceptive materials	32(15.91)	5.05	2.99 (0.64,1.92)
Advice during pregnancy	31(15.4)	3.53	1.99 (0.64,1.86)
Education or Counseling on STI	20(10.35)	2.02	0.67(0.74,1.23)
Referral to a nearby health Facility	20(9.6)	3.03	1.99 (0.64,1.71)
<b>Ever talked with the CBRHA</b>			
Yes	118(57.84)	88(43.14)	5.06 (3.32,7.97)
No (Ref)	86(42.16)	116(56.86)	1.00
<b>Ever received any service from the CBRHA</b>			
Yes	124(60.78)	112(54.90)	3.91 (3.20,6.57)
No (Ref)	80(39.22)	88(43.14)	1.00
<b>Willingness to work as CBRHA</b>			
Willing	153(75)	88(43.14)	1.72 (1.19,2.37)
Uncertain	17(8.33)	22(10.78)	0.99 (0.54,1.90)
Not willing (Ref)	34(16.66)	94(46.08)	1.00
<b>Knowledge of a dropout CBRHA</b>			
Yes	65(31.68)	21(10.29)	0.29 (0.17,0.48)
No (Ref)	183(89.71)	139(68.14)	1.00
<b>Satisfaction with CBRHS</b>			
Satisfied	113(55.39)	76(37.25)	6.98 (4.86,10.03)
Not satisfied (Ref)	91(44.61)	128(62.75)	1.00

**Socio-demographic & other characteristics of the study population in relation to current use of MCM**

Variable	Current MCM use		OR (95% CI)
	Yes	No	
<b>Age</b>			
>27	50(65.8)	26(34.2)	2.34 (1.39,3.96)
<27 (Ref)	123(45.1)	193(54.9)	1.00
<b>Marital Status</b>			
Married	73(96.1)	621(86.7)	3.72 (1.15,12.05)
Others (single, widowed, separated) (Ref)	3(3.9)	95(13.3)	1.00
<b>Current No of children</b>			
> 4	76 (37.25)	167(26.8)	2.39 (1.43,4.00)
< 4(Ref)	98(48.03)	201(98.53)	1.00
<b>Occupation</b>			
House wives	199(92.1)	171(79.7)	2.96 (1.26,6.96)
Others (farmers, local drink sellers, students, etc) (Ref)	6(7.9)	145(20.3)	1.00
<b>Educational status</b>			
Formal education (Gr.2-8)	11(14.5)	46(6.4)	2.69 (1.23,5.77)
Read & write	14(18.4)	97(13.5)	1.62 (0.82,3.16)
Illiterate (Ref)	78(67.1)	573(80)	1.00

Variable	Current use of MCM		CBRH Service use	
	Adjusted	OR (95% CI)	Adjusted	OR (95% CI)
<b>Age</b>				
< 27	1.95	(0.41,1.19)	2.76	(0.94,1.28)
>27 (Ref)	1.00		1.00	
<b>Marital Status</b>				
Married	1.19	(0.20,1.08)	1.35	(0.11,1.08)
Others (single, widowed, separated) (Ref)	1.00		1.00	
<b>Occupation</b>				
House wives	2.31	(0.11,1.86)	1.84	(0.41,1.69)
Others (farmers, local drink sellers, students, etc) (Ref)	1.00		1.00	
<b>Educational status</b>				
Literate	2.03	(1.08,3.83)	1.77	(1.96,3.24)
Illiterate (Ref)	1.00		1.00	
<b>Current No of children</b>				
< 4	0.60	(1.71,3.64)	1.81	(1.95,3.46)
>4 (Ref)	1.00		1.00	
<b>Acceptance of the CBRHA</b>				
Accept	0.88	(1.34,2.29)	1.62	(1.57,3.48)
Not accept (Ref)	1.00		1.00	
<b>Ever talk to CBRHA about RH</b>				
Ever talked	15.69	(6.74,36.52)	0.12	(1.65,2.46)
Never talked (Ref)	1.00		1.00	
<b>Willingness to work as CBRHA if selected by community</b>				
Willing	1.86	(0.43,1.71)	2.79	(1.66,4.67)
Not willing (Ref)	1.00		1.00	
<b>Satisfaction by the CBRHS</b>				
Satisfied	3.19	(1.10,9.20)	3.40	(1.71,6.73)
Not satisfied (Ref)	1.00		1.00	

Taking the median age as a cut of point for grouping the respondents into two age groups, i.e. under twenty seven (<27) and above 27 years of age, the odds of currently using MCM was significantly higher among those above the age of 27 years [OR (95%CI)= 2.34 (1.39,3.96)]. It was also found out that those women who are currently married and those who have more than 4 children are more likely to use MCM when compared to the single ones (never married, widowed and divorced)

and those who have less than or equal to 4 children [OR(95%CI)=3.72(1.15,12.05), 2.39(1.43,4.00) respectively]. Having schooling (formal education) is significantly associated with current use of MCM compared to illiterates [OR (95%CI) =2.69(1.23, 5.77)].

Logistic Regression analysis result of possible explanatory variables for current Use of MCM and CBRH Service use.

As indicated above, logistic regression analysis was done for selected Socio demographic, reproductive and CBRH service characteristics to control for possible confounders and detect the relative effects of the selected variables on the dependant variables. The result showed that there was no significant association between the various Socio-demographic characteristics such as Age, marital status, and Occupation and current use of MCM and CBRH Service use. Educational Status was found to have significant association with current use of MCM, those who are literate (read & write & have schooling) are more likely to be users of MCM [OR (95% CI) = 2.03 (1.08, 3.83)].

Nevertheless, Educational status was found to have no statistically significant association with CBRH service use in the regression analysis.

Currently surviving number of children was not found to have significant association with both current use of MCM and CBRH service use.

Ever talk to the CBRHA about RH & Satisfaction by the CBRH service have significant association with current use of MCM [OR (95% CI) = 15.69(6.74, 36.52), & 3.19(1.10, 9.20) respectively].

Acceptance of the CBRHA, Satisfaction by the CBRH service, and willingness to work as a CBRHA were found to be associated with CBRH service use [OR (95% CI) = 1.62(1.75, 3.48), 3.40(1.71, 6.73), & 2.79(1.66, 4.67) respectively].

## DISCUSSION

This study provided important information regarding Community based reproductive health use and services, knowledge, attitude and practice, HIV/AIDS & STI knowledge in women of reproductive age group residing in remote rural areas.

The study mainly assessed factors related to CBRHS utilization such as quality of services, community

participation, level of service use and satisfaction, and support from health workers, other structures and bodies.

The study showed that there was a significant difference between the successful and weak program areas in the current use of MCM, maternal health care service and CBRH service. The distribution of socio-demographic characteristics of the two study areas did not show significant difference except on educational status. Nevertheless, the majority of the study populations are illiterate, 60 % in successful and 86 % in weak program areas. The proportion of women who had formal education was significantly higher in successful areas which has contributed to better use of service [OR (95% CI) =2.69 (1.23, 5.77)]

The reproductive characteristics of the study women did not show significant difference. In this study history of unwanted pregnancy was 10.94% in successful and 21.18% in weak program areas which was not a significant difference. This finding was lower when compared to other similar studies, e.g., in rural CBD of East Gojjam areas it was 15.1 %.

The history of at least one induced abortion, 3.08% in successful and 4.48% in weak areas, is also found to be lower than other similar studies in other parts of the country, 9.3% in CBD areas of East Gojjam. It is still much lower when compared to findings of similar studies in other parts of Africa; 29% in a study done in Mali (The population Council and Africa OR/TA projects, 1993). This may be due to the religious background as the majority (99.01%) of the study population is Orthodox Christians, which condemns induced abortion as a serious trespassing of God's commands & as such, a sinful act. This could result either in less practicing of the act or low reporting of the act for fear of stigmatization.

Like most of the study results in Ethiopia, the pills and Depo were the most

widely known MCM followed by Injectables in both study areas (Genna S. 2000, Jane NC, Askew I. 1997, and Legesse T.1997). Surprisingly, very few women (6.3%) mentioned other options of MCM such as norplant, tubal ligation, vasectomy, foam tabs or jelly, etc.

More than half of the non-users of CBRHS have the intention to use the service in the future. The intention of using the service has no significant difference between the two areas. This shows that the CBRHS is needed by the community which is a potentially good sign both for the success and sustainability of such a community based program (Oakley P. 1989, Rifkin BS. 1990, and Katz KR. et al. 1998).

The likely of ever use of MCM was twice higher in successful area when compared to the weak areas. The discontinuation rate is higher in weak areas which could be one reason for the low achievement of the program in these areas. High defaulter rate affects success of a program and is a threat for the sustainability of the program (Mitike G. 2000, Ali M. & Cleland J. 1995). The main reasons for discontinuation of contraceptive use are need for more children, fear of actual or perceived side effects of contraceptives, rumors about contraceptives & lack of services in the locality. This finding is similar to various studies done in the country and elsewhere in other developing countries (Genna S. 2000, Jane NC, Askew I. 1997).

The majority of study women who are currently accepting contraceptives are using pills followed by injectables. This could be explained by the fact that pills are relatively readily available and accessible from the community agents and health facilities. This pattern was similar to other CBD project areas (Genna S. 2000, Kora A. 1997, Legesse T. 1997).

## CONCLUSIONS

Based on the findings the following conclusions were forwarded:

- There is a better use of MCM, Maternal health care service (ANC) and CBRH service in the successful program areas
- Illiteracy rate is very high among the women in the study areas which could be an obstacle for use of RH services as education is strongly associated with any health service use.
- Awareness to MCM is high; however, knowledge of specific MCM is quite low. The majority of study women know only Pills & Injectables (depo) among the range of modern contraceptive methods. This undoubtedly limits their choice there by restricting from using or seeking the service.
- The knowledge level of condoms whether as RH method or as a means of preventing HIV/AIDS is low. This is in contradiction with the current prevalence and speed of transmission of the disease in the country.
- The knowledge of other components of RH such as HIV/AIDS & STI is low and the same is true for use of MCH services (e.g. ANC) especially in the weakly performing CBRHP areas. This indicates that the delivery of integrated RH services even at this level is still rhetoric.
- Community involvement in the selection of CBRHA is quite low & this resulted in low awareness of their presence and subsequently, in low acceptance of the agents there by affecting the interest to use CBRH service, particularly, as observed in the weak areas.
- The CBRHP did not make use of existing community organizations which are found to be a key element to ensure community participation and success of a community based program in many countries with similar socio-cultural & economic set up.

- High client satisfaction by the CBRH service, better interpersonal communication & acceptance of the agents is indicators for the relatively better quality of service in successful areas which certainly have contributed to the relative success of the program in this area.

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