ORIGINAL ARTICLE

ADOLESCENT REPRODUCTIVE HEALTH SERVICES IN JIMMA CITY: ACCESSIBILITY AND UTILIZATION

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ABSTRACT

BACKGROUND: *Accessibility of health services for reproductive health (RH) is an important factor in increasing use of reproductive health services. Reports show that reproductive health services access in Ethiopia varies by region. A better understanding of the accessibility and utilization of existing reproductive health services by adolescents will help to address gaps with respect to provision of youth friendly services. The objective of this study was to assess the access to and the utilization status of RH services by adolescents in the age group of 15-19 years in Jimma City.*

METHODS: *A community-based cross-sectional study was conducted in Jimma City, Southwest Ethiopia from February to March 2004. Structured questionnaire was used to collect data from the sampled population. Adolescents aged between 15 to 19 years were interviewed about their accessibility and utilization of reproductive health services. The data were entered into two different computers using SPSS for windows version 12.0.1 and analyzed using STATA 9.1. Descriptive, bivariate analysis and logistic regression were employed to analyze the data.*

RESULTS: *Ninety five percent of adolescents could access Information, Education and Communication with very easy access and easy accessibility. However, 465(43%) of adolescents had difficulty (difficulty and great difficulty) to access abortion care. Almost all mean index of the variables were close to the mean and midpoint of the accessible average index (2.09±SD=0.52). Among 1082 adolescents, 445(41.1%), and 375(34.7%) were ever and current users of reproductive health services, respectively. Among socio-demographic and economic predictors, age and means of communication in the households showed a significant association with utilization of reproductive health services (p<0.05). Significant association was observed between utilization and knowledge about reproductive health services and source of information (p<0.05).*

CONCLUSION: *The majority of adolescents were not utilizing reproductive health services. Thus, much more intensified effort is required to increase for each the reproductive health service utilization of adolescents. There should be health promotion activities for adolescent in order to improve the accessibility of the services and utilizations or reproductive services.*

KEYWORDS: *accessibility, utilization, reproductive health, adolescent, Jimma*

INTRODUCTION

Approximately 1.2 billion adolescents live the world, of which nearly 900 million are in developing countries (1). Several countries in Sub-Saharan Africa (SSA) including Ethiopia have large and increasing adolescent populations that exceed those from other parts of the world (1, 2). Adolescents in Ethiopia were estimated to be 19.3% of the total population (2).

The fact that they have a large and significant share of the worlds' population, make it important to address their problem. More than 33 percent of the disease burden and almost 60 percent of premature deaths among adults can be associated with behaviors or conditions that began or occurred during adolescence for example sexual abuse and risky sex (3). The major health problems of adolescents include STDs, HIV/AIDS, absence of family

planning method choice, unwanted pregnancy, lack of abortion care services, mental illnesses, crime and violence (3).

Adolescence has been described as a critical developmental period in the life course with major changes occurring in biological, cognitive, psychological, social and environmental processes, exploratory behavior and experimentation with a wide range of behaviors that are essential for normal adolescent development. Many of the avoidable problems in reproductive health (RH), such as unwanted pregnancy, abortion and its complications, sexually transmitted infections (STIs) including the acquired immunodeficiency syndrome (AIDS) require for various preventive strategies to be put in place. Reproductive health is an important aspect of health, as it impinges on quality of life, especially for women (4).

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Knowledge about the availability of health services, little information about service availability, transportation and distance, confidentiality, ability to pay, parental notification rules and lack of differential centers remain important issues affecting adolescents' access (5). Most health services for adolescents are designed for adults and do not always have favorable conditions to meet the special needs of adolescents. This is, in part, because adolescents' accesses to the services are not clearly understood by themselves and service providers (5). For the proper planning of appropriate health services for adolescents, it is crucial to have knowledge of the pattern of their use.. At the moment, there is little information about the extent to which adolescents utilize available health services in Ethiopia as most studies that examined the use of health services had primarily focused on adults (6). .

Studies conducted among adolescents in developed countries reported a high utilization rate of modern health services (7, 8). Accessibility of reproductive health services is an important factors their utilization (5). A better understanding of the accessibility and utilization of RH services by adolescents will help to address the gaps in provision of youth friendly services. Therefore, the aim of this study was to assess accessibility and ever and current utilization of RH services and identify their predictors among adolescents 15 to 19 years old in Jimma City, South west Ethiopia.

SUBJECTS AND METHODS

The study was conducted in Jimma City, which is 357 km away from Addis Ababa. The study period was from February to March 2004. Detailed information about study community setting was described elsewhere (9).

This paper is part of a study conducted to assess Reproductive Health Knowledge and Attitude among Adolescents in Jimma City (9). The study participants were adolescents of 15 to 19 years old who resided in the study area for at least six months. From the 1994 census, the total projected adolescents living in Jimma City were 27,140. The sample size was determined using Epi Info Version 6.04d statistical package for estimating single population proportions. We assumed 50% proportion with 95% confidence level and 3% margin of error to get a maximum sample size. On the calculated sample size of 1027, twenty percent was added for non-response giving a total sample size of 1128. From 21 kebeles (smallest administrative unit) that of Jimma City, 9 were randomly selected and included. The sample was allocated proportional to the adolescent population size of each Kebele. The first respondent from each Kebele was identified using lottery method and then systematic sampling technique was used to identify the other respondents and followed North, east, south and West directions at interval of every seventh households.

A structured questionnaire was developed and administered to the respondents. The questionnaire and consent documents were developed in English then translated into Amharic language and finally back translated into English by another translator. Interviewers were recruited and underwent two days training that included cognitive interviewing, practice interviewing, and role playing After two days training, interviewers undertook a pre-test was conducted Following the pre-testing,, interviewers and investigators met to discuss experiences, issues, and resolve questionnaire problems. Pre-test data were also checked for consistency, outliers, and missing values. Upon completion of the pre-testing, one day follow-up training was conducted with a focus on resolving issues, allowing interviewers to share experiences, and finalizing the questionnaires. Interviews were conducted in private place. In the case of more than one adolescent in the households, lottery method was used to recruit only one.; for households, in which the adolescent was not found at home three visits were made before considering them as non-respondent. Oral consent was obtained from either parent (mother or father) if they agree of interviewing their son or daughter. Oral consent was also obtained from each interviewee for their agreement to participate in the study. However, the adolescents were assured that neither the interviewer nor their parents would have access to their responses. Privacy, anonymity and confidentiality were maintained throughout the process of the study. The domain of the study covers accessibility and utilization of health services for medical check up, sexually infection treatment, voluntary counseling and testing, family planning, IEC and abortion care by adolescents of age 15 to 19 years. The responses for accessibility, which ranged from "very easy access" to "access with great difficulty" were converted into four-point scales. A summary mean index provides the average scores for the accessibility

Data were entered, cleaned and stored into two different computers, using SPSS for windows version 12.0.1 and analyzed using STATA 9.1. Descriptive, bivariate and logistic regression analysis was employed. Descriptive statistics were calculated for all variables. Independent t-test was done to see compare accessibility means. In bivaraite analysis crude odds ratio and confidence interval were determined. Logistic regression was used to determine the adjusted odds ratio and corresponding confidence interval. Maximum likelihood estimates of the independent effect of the predictor variables and Wald test statistics for a single parameter estimate were used to see the level of significance. The strength of association was interpreted using the adjusted odds ratio and 95% CI. The criterion for statistical significance was set at 0.05.

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The following operational definitions were used;

Reproductive health services is the services provided for adolescent such as abortion and postabortion care, IEC, family planning, VCT, medical check up, sexual transmitted infection treatment and likes

Accessibility: defined as the sum of economic, physical (geographical), cultural accessibility and not merely the physical presence of reproductive health services

Very easy accessibility: adolescent can access the reproductive health services without any problem.

Easy accessibly: Adolescent access reproductive health services with minor difficulty

RESULTS

Complete data were available for 1082 adolescents out of 1128 sampled households, yielding a response rate of 96%. Demographic and socioeconomic information of study participants were explained elsewhere (9).   As shown in figure 1, almost 95 % of adolescents accessed information Education and communication (IEC) with very easy access and easy accessibility. However, 465(43%) of adolescents had difficulty (difficulty and great difficulty) to access abortion care (Fig 1).
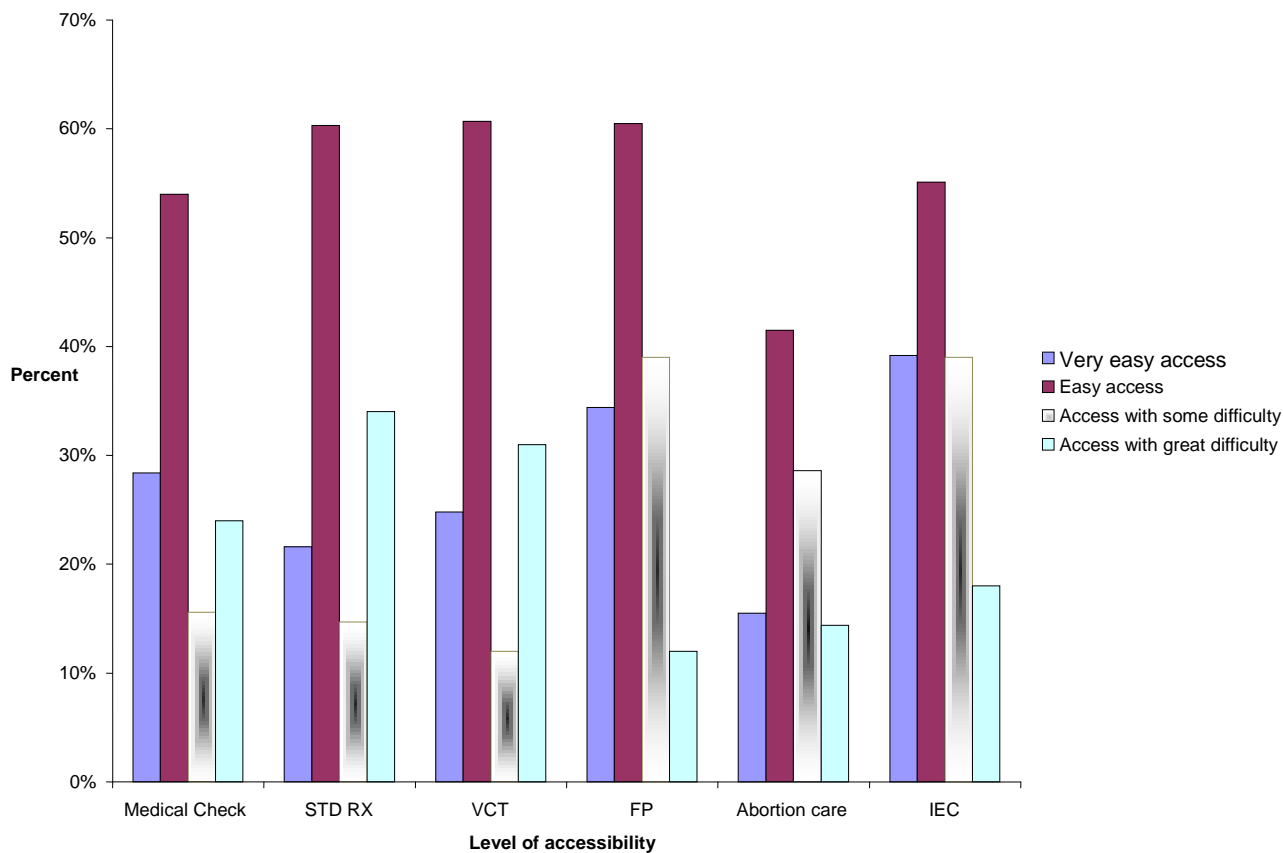
Figure 1. Level of accessibility to RH services for adolescents of age 15-19 years, Jimma City, Southwest Ethiopia, March, 2004.

Table 1. Mean scores of adolescent of age 15-19 years on index cultural accessibility to reproductive health services use by the selected characteristics, Jimma City, Southwest Ethiopia, March, 2004.

Characteristics	Access mean score	P-value
Overall mean	2.10	
Age		
15-17	2.12	
18-19	2.06	0.0505
Sex		
Female	2.09	
Male	2.11	0.5627
Marital status		
Single	2.10	
Ever married	1.97	0.0969
Ethnic group		
Oromo	2.08	
Others	2.11	0.4193
Religion		
Muslim	2.06	
Christian	2.12	0.0677
Educational status		
Elementary and less	2.29	
Above elementary	2.09	0.0040
Occupational status		
Student	2.09	
Others category	2.14	0.3277
Family size		
Five and less family size	2.10	
Above five family size	2.09	0.6099
Radio		
No	2.22	
Yes	2.09	0.0158
Television		
No	2.12	
Yes	2.08	0.2541
Telephone		
No	2.10	
Yes	2.09	0.7367
Newspaper		
No	2.16	
Yes	2.045	0.0002
Ever utilization of services for RH		
No	3.01	
Yes	2.93	0.0000
Current user of RH		
No	3.01	
Yes	2.93	0.0000

Table 1 shows the bivariate relationships between demographic, socioeconomic characteristics, means of functional communication, history of health services utilization for RH with the summary index of cultural accessibility. Among all participants, the mean score on the 6-point type of health services for RH with four scales of response ranging from 1 (very easy accessibility) to 4 (accessibility with great difficulty) were indexed and then averaged; The mean score of 2.09(SD=0.52) falls near the midpoint of the index. Almost all mean indexes of the variables were close to the mean and midpoint of the accessible average index. However, those who had better education, those who had functional radio and newspaper as means of communication displayed relatively more accessibility to RH services (P<0.05). Adolescents who were ever users or current users of RH services had on average better access than those who never and not using currently

(P<0.0000).

Table 2. life time and current utilization of health services for RH by the study subjects, Jimma City, Southwest Ethiopia, March, 2004.

RH utilization	Frequency	Percent
RH service ever utilized	445	41.1
Frequency of utilization (n=445)		
Always	51	4.2
mostly	59	5. 5
Occasional	335	31.0
Place of services obtained for RH		
Government hospital	243	22.5
Health center	251	23.2
private clinic	177	16.4
Red cross	171	15.8
FGAE	299	27.6
Pharmacy	131	12.1
Traditional healers	34	3.1
Others (community health workers etc)	83	7.7
Reason for visiting RH providers in the past		
Medical Checkup	175	16.2
STI treatment	49	4.5
VCT	179	16.5
FP	190	17.6
Abortion care	34	3.1
IEC	370	34.2
Current RH utilization	375	34.7
Types of service being rendered at the moment		
Medical Check UP	164	15.2
STD treatment	40	3.7
VCT	147	13.6
FP	176	16.3
Abortion care	26	2.4
IEC	312	28.8
Places of current RH services		
Government hospital	243	22.5
Health center	240	22.2
private clinic	166	15.3
Red cross	169	15.6
FGAE	289	26.7
Pharmacy	128	11.8
Traditional healers	22	2.0
Others	44	4.1
Reason for not using RHS		
Don't need now	235	21.7
Never thought of	58	5.4
I am too young	207	19.1
Lack of knowledge	144	13.3
Time constraint	83	7.7
I don't want to use	63	5.8

Among 1082 adolescents, 445(41.1%), and 375(34.7%) of the adolescents were ever and current users of RH services, respectively. For ever users, RH services were sought from Family Guidance Association of Ethiopia (FGAE) 299 (27.6%), governmental health center 251 (23.2%) and governmental hospital 243

(22.5%). Traditional health services were sought for 34 (3.1%) of adolescents. Thirty four percent (370) of adolescents ever used health services for Information, Education and Communication (IEC) followed by family planning 190 (17.6%). Five percent (49) and 34(3.1%) of them used health services for Sexually Transmitted Infections (STI) treatment and abortion care, respectively.   During the study period, 312(28.8), 176(16.3%) and 164 (15.2%) were current users of IEC , family planning service and medical check-up, respectively. Twenty seven percent (289) of adolescents received the health services for RH from FGAE of Jimma City followed by Jimma Specialized Hospital 243(22.5 %) and Jimma Health Center 240(22.2%). For current use of health services for RH, traditional health services were sought for 22 (2.0%) of adolescents. Adolescents who never used RH services were 537(58.9%). Adolescents who did not seek any RH service were asked

to give reasons for not using health services. The main reasons mentioned were that they do not need it at the moment 235 (21.7%) and considering themselves as being young to use RH services 207 (19.1%) (Table 2).

Age group of 18 to 19 years were 44% times more likely to ever use RH services than those in the age group of 15 to 17 years old after adjusting for other predictors (adjusted OR=1.4 95% CI (1.10, 1.9). The availability of functional television and telephone in the households were associated with reduced ever use of health services for RH by adolescents when adjusted for covariates [adjusted OR= 0.7 95% CI (0.5, 0.9), adjusted OR=0.7 95% CI (0.5, 0.9) respectively]. On the other hand, adolescents in the households with functional radio and access to Newspaper were likely to ever use RH services [adjusted OR= 1.7, 95% CI (1.1, 2.7), adjusted OR=2.5 95% CI (1.9, 3.3), respectively] (Table 3).

Table 3. Crude and adjusted odds ratio (95% confidence intervals) from bivariate and logistic regression analysis of factors associated with ever utilization of health services for RH, Jimma City, Southwest Ethiopia, March, 2004.

Characteristics	Unadjusted OR(95%CI)	P-value	adjusted OR(95% CI)	P-value
Age group				
15-17	1.0		1.0	
18-19	1.5 (1.2, 1.9)	0.0011	1.4 (1.1, 1.9)	0.007
Sex				
Female	1.0			
Mae	0.9 (0.7, 1.1)	0.2795	NS	
Marital status				
Single	1.0		1.0	
Ever married	2.5 (1.3, 4.5)*	0.0033	1.5 (0.8, 3.0)	0.240
Ethnic group				
Oromo	1.0			
Others	1.0 (0.8, 1.3)	0.8903	NS	
Religion				
Muslim	1.0			
Christian	1.0 (0.7, 1.2)	0.7075	NS	
Educational status				
Elementary school and less	1.0			
Above elementary school	1.4 (0.8, 2.4)	0.2611	NS	
Occupation				
Student	1.0		1.0	
Other category	1.7 (1.2, 2.5)*	0.0033	1.3(0.9, 2.0)	0.195
Having functional radio				
No	1.0		1.0	
Yes	1.5 (1.0, 2.3)	0.0699	1.7 (1.1, 2.7)	0.031
Having functional television				
No	1.0		1.0	
Yes	0.7(0.5, 0.8)**	0.0006	0.7 (0.5, 0.9)	0.013
Having functional telephone				
No	1.0		1.0	
Yes	0.6 (0.5, 0.8)**	0.0000	0.7 (0.5, 0.9)	0.009
Access to newspaper				
No	1.0		1.0	
Yes	2.4 (1.8, 3.1)**	0.0000	2.5(1.9, 3.3)	0.000

OR= Odds ration, CI= Confidence interval, * = p.<0.05, ** p<0.01, NS= Non significant in unadjusted model

Adoloscents in the age group 18 to 19 years were   37 % more likely to be current users compared to those

15 to 17 years old (Adjusted OR=1.4 95% CI (1.1, 1.8) after controlling other demographic and socioeconomic variable. Similar to ever use, adolescents from households with functional radio and access to Newspaper were more likely to be current users [Adjusted OR= 1.7, 95% CI (1.02, 2.7), adjusted OR=2.2, 95% CI (1.9, 2.9), respectively] whereas adolescent from households with functional telephone were 34.0% times less likely to be current users [adjusted OR=0.7, 95% CI (0.5, 0.9)] (Table 4).

Knowledge about types of RH services showed significant association with ever use. Adolescents with knowledge of family planning and VCT services were 9 and 3 time more likely to ever use RH services, [adjusted OR =8.9, 95 % (2.3 26.6)] and [adjusted OR=2.8 95% CI (1.5 5.3) respectively. Whereas adolescents who had knowledge of STI treatment as components of RH services 71.0% were less likely to ever use RH services (adjusted OR= 0.3 (0.2 0.4). Adolescents who had interaction with family and peers and had access to pamphlets and posters as source of information for RH services were more likely to be ever user [adjusted OR= 1.4 95% CI (1.01 1.8); adjusted OR= 2.8 95% CI (1.96, 3.9); adjusted OR=4.7, 95% (3.7 6.2); and adjusted OR=1.7, 95% CI (1.2 2.3), respectively] (Table 5).

Tables 4. Crude and adjusted odds ratio (95% confidence intervals) from bivariate and logistic regression analysis of factors associated with current utilization of services for RH, Jimma City, Southwest Ethiopia, March, 2004.

Characteristics	Unadjusted OR(95%CI)	P-value	adjusted OR(95% CI)	P-value
Age group				
15-17	1.0		1.0	
18-19	1.4(1.14, 1.8)	0.0085	1.4 (1.1, 1.8)	0.020
Sex				
Female	1.0			
Mae	1.0 (0.8, 1.3)	0.9462	NS	
Marital status				
Single	1.0		1.0	
Ever married	2.2 (1.2, 4.1)	0.0072	1.7 (0.9, 3.1)	0.111
Ethnic group				
Oromo	1.0			
Others	0.9 (0.7, 1.2)	0.5950	NS	
Religion				
Muslim	1.0			
Christian	0.9 (0.7, 1.2)	0.4438	NS	
Educational status				
Elementary school and less	1.0			
Above elementary school	1.1 (0.6, 2.0)	0.6848	NS	
Occupation				
Student	1.0			
Other category	1.2 (0.9, 1.8)	0.2650	NS	
Having functional radio				
No	1.0		1.0	
Yes	1.6 (1.0, 2.5)	0.0481	1.7(1.0, 2.7)	0.042
Having functional television				
No	1.0		1.0	
Yes	0.9 (0.6, 1.00)	0.0471	0.8 (0.6, 1.1)	0.234
Having functional telephone				
No	1.0		1.0	
Yes	0.6 (0.5, 0.8)**	0.0005	0.7 (0.5, 0.9)	0.009
Access to newspaper				
No	1.0		1.0	
Yes	2.2 (1.7, 2.8)**	0.0000	2.2 (1.7, 2.9)	0.000

OR= Odds ration, CI= Confidence interval, * = p.<0.05, ** p<0.01, NS= Non significant in unadjusted model

Table 5. Crude and adjusted odds ratio (95% confidence intervals) from bivariate and logistic regression analysis of factors associated with ever utilization of health services for RH, Jimma City, Southwest Ethiopia, March, 2004.

Characteristics	Unadjusted OR(95%CI)	P-value	adjusted OR(95% CI)	P-value
Knowledge about family planning				
No	1.0		1.0	
Yes	6.9 (2.7, 17.6)	0.0000	8.9 (3.00, 26.6)	0.000
Knowledge about STD services				
No	1.0		1.0	
Yes	0.7 (0.5, 0.99)	0.0393	0.3 (0.2, 0.4)	0.000
Knowledge about VCT services				
No	1.0		1.0	
Yes	3.0 (1.7, 5.5)	0.0002	2.9 (1.8, 5.3)	0.009
Knowledge about IEC services				
No	1.0		1.0	
Yes	1.6 (1.10, 1.92)	0.0086	1.1 (0.7, 1.6)	0.708
Radio as source of RH information				
No	1.0			
Yes	1.2 (0.7, 1.6)	0.3355	NS	
Television as source of RH information				
No	1.0			
Yes	0.9(0. 7, 1.2)	0.3366	NS	
Newspaper as source of RH information	1.0		1.0	
No	1.6 (1.2, 2.0)	0.0004	0.9 (0.7, 1.3)	0.601
Yes				
Family as source of RH information				
No	1.0		1.0	
Yes	1.8 (1.4, 2.3)	0.0000	1.4(1.0, 1.8)	0.043
Peer group as source of RH information				
No	1.0		1.0	
Yes	3.8(2.8, 5.2)	0.0000	2.8 (2.0, 3.9)	0.000
Teachers as source of information				
No	1.0		1.0	
Yes	1.5 (1.1, 2.0)	0.0050	1.3 (1.0, 1.8)	0.104
Pamphlet as source of RH information				
No	1.0		1.0	
Yes	2.1 (1.6, 2.7)	0.0000	4.8 (3.7, 6.2)	0.000
Posters as source of RH information				
No	1.0		1.0	
Yes	5.63 (4.1, 7.7)**	0.0000	1.7 (1.2, 2.3)	0.001

OR= Odds ration, CI= Confidence interval, * = p.<0.05, ** p<0.01, NS= Non significant in unadjusted model

Adolescents with knowledge of family planning were 13 times more likely to be current user of RH services (adjusted OR=12.5, 95% CI (3.3, 47.1), whereas adolescent with knowledge of STI treatment as components of RH services were 78 % less likely to be current user [adjusted OR=0.2, 95% CI (0.2, 0.4)]. Adolescents who stated teachers, peers, pamphlets and posters as source of information for RH were more likely to be current users [Adjusted OR=1.8, 95%CI (1.3,2.4), Adjusted OR=2.8, 95%CI (2.1. 4.4), Adjusted OR=1.6, 95%CI (1.1,2.2), Adjusted OR=2.2.8, 95%CI (1.6, 3.0), Adjusted OR=3.4, 95%CI (2.5,4.7) (Table 6).

DISCUSSION

This study assessed a range of possible predictors, including demographic, socioeconomic as well knowledge about RH services. Majority of the respondents accessed the different components of health services provided in the locality easily. However, the overall mean accessibility of health services for RH was moderate. This study showed that the average index of accessibility of RH services was positively associated with higher educational status, presence of functional radio in the households, access to newspaper and history of RH services utilization. The finding implies that

accessibility is a multidimensional concept that it is not only limited to physical proximity and travel time to services centers, but also involves economic, psychological and attitudinal costs, cognition and the perceptions of potential clients (10).

Table 6. Crude and adjusted odds ratio (95% confidence intervals) from bivariate and logistic regression analysis of factors associated with current utilization of health services for RH, Jimma City, Southwest Ethiopia, March, 2004.

Characteristics	Unadjusted OR(95%CI)	P-value	Adjusted OR(95%CI)	P-value
Knowledge about family planning				
No	1.0		1.0	
Yes	9.0 (2.8, 29.5)	0.0000	12.5 (3.3, 47.1)	0.000
Knowledge about STD services				
No	1.0		1.0	
Yes	0.6 (0.6, 0.8)	0.0014	0.2 (0.2, 0.4)	0.000
Knowledge about VCT services				
No	1.0		1.0	
Yes	2.5 (1.3, 4.6)	.0028	2.0 (0.9, 4.4)	0.082
Knowledge about IEC services				
No	1.0			
Yes	1.2(0.9, 1.5)	0.3223	NS	
Radio as source of RH information				
No	1.0		1.0	
Yes	2.7 (1.9, 3.9)	0.0000	1.5 (0.8, 2.6)	0.176
Television as source of RH information				
No	1.0		1.0	
Yes	1.5 (1.1, 2.0)	0.0057	0.7 (0.6, 1.0)	0.061
Newspaper as source of RH information				
No	1.0		1.0	
Yes	2.2 (1.7, 2.9)	0.0000	1.4 (1.0, 1.9)	0.059
Family as source of RH information				
No	1.0		1.0	
Yes	2.4 (1.8, 3.1)	0.0000	1.8 (1.3, 2.4)	0.000
Peer group as source of RH information				
No	1.0		1.0	
Yes	3.9 (2.8, 5.5)	0.0000	1.8 (2.1, 4.4)	0.000
Teachers as source of information				
No	1.0		1.0	
Yes	1.9 (1.4, 2.5)	0.0000	1.6 (1.10, 2.2)	0.013
Pamphlet as source of RH information				
No	1.0		1.0	
Yes	2.8 (2.2, 3.7)	0.0000	2.2 (1.6, 3.0)	0.000
Posters as source of RH information				
No	1.0		1.0	
Yes	4.4 (3.3,5.9) [§]	0.0000	3.4 (2.5, 4.7)	0.000

OR= Odds ration, CI= Confidence interval, * = p.<0.05, [§] p<0.01, NS= Non significant in unadjusted model

Ever use of RH services is basically measured as the cumulative experience of adolescents with RH services (11). In this study the ever use of RH services was found to be 41.1%; however, the current utilization of RH services, elicited by asking past three months use of RH services from the date of interview, was found to be lower than the ever use (34.7%). Both Ever and current utilization rate of overall RH services were considerably lower as compared to a report from Tanzania where 75% of adolescents used health services for RH (12) and the developed world experiences (7, 8). In this study, despite better access to health services, adolescents' utilization of health services is low. In a study conducted in Addis Ababa, considerable proportion

of the adolescents reported that existing health services are inaccessible, unaffordable and unacceptable. The major barriers to utilizing reproductive health services are feeling of embarrassment and fear of being seen by parents or people who know them (13). This indicates that geographic accessibility does not imply utilization of health services. This is also evidenced by other study carried out in Ethiopia where adolescents with accessible family planning services (100% the geographic coverage and the availability of all levels of health institutions), the prevalence of unintended pregnancy was relatively high (33.3%) (14).

The findings in our study indicated that adolescents used various options of health services similar to those previous report among adults in Ethiopia (15) and elsewhere in Africa (12, 16). This study showed that a small proportion (3.14 % among ever users and 2.03 of current users) of the adolescents used a traditional health service which is slightly lower than reports from other parts of this country (15). This could be explained in several ways; first, the study addresses more culturally sensitive reproductive health issues such as STI and HIV/AIDS as compared to other studies and secondly, the sample was from an urban area, where usually there is a relatively high number and options of health facilities for RH services and easier geographic access compared to other findings from rural areas. Thirdly, adolescents might have underreported use of traditional healers (such as in the case of abortion services) which is supported by the fact that only 3.2 % and 2.4 % of adolescents declared as ever user and current user, respectively of health services for abortion care in contrast to other reports (17, 18).

Other demographic and socio-economic variables such as education level and schooling do not show statistical significant association with ever or current use of RH services. This finding is not in agreement with other studies in Ethiopia (6, 19, 20). This might be due the fact that this study was focused only in town where they had betted access to education. However, adolescents within age groups of 18 to19 years were more likely to ever and currently use health services than adolescents of age 15 to 17 years. This is in line with other finding from Northwest Ethiopia where older age groups were more likely to use family planning services than younger age group when adjusted for other covariates (21). Adolescents from the households with radio and newspaper as means of communication were more likely to ever and currently use health services than those without these means of communications when controlled for other covariates. This might due to the fact that both means of communication can be owned by all class (both the poor and the richer social group.

On the other hand, adolescents from households with television and telephone as means of communication were less likely to ever or currently use

health services for RH than adolescents without these means of communications. This might be explained by the fact that adolescents from households with television and telephones might be from high socio-economic status (possession of telephone and televisions as indicator of better economic status) and as a result perceived as lower risk for reproductive health problems. Poor adolescents bear a disproportionate burden of the reproductive health problems in their age group. There is a strong association between poverty and the health status of adolescents and between poverty and adolescents' use of health services. For the poorest 20 percent of young women are between 1.7 and 4.0 times as likely to have an early birth as the richest 20 percent of young women. Similar disparities between rich and poor adolescents are seen for indicators such as early marriage, skilled attendance at birth, use of contraception, and HIV/AIDS transmission (4). This might have resulted in an apparent better utilization of RH services by those adolescents from households without television and telephone.

Variables related with knowledge of RH services are associated with ever and current utilization of health services for reproductive health. Adolescents with knowledge of VCT for HIV/AIDS were three times more likely to ever use RH services than adolescents with no such knowledge when other covariates were controlled. Unlike our finding, the study in Addis Ababa showed that knowledge about VCT was not associated with use of health services for pre-marital screening (RH) (22). This difference could be due difference in respondent both in terms of demographical characteristics and the time difference these studies were conducted. On the other hand, adolescents with knowledge of STI treatment were less likely to ever and currently use health services for RH than those adolescents who were not aware of STI treatment as services for RH. This might be because those who knew STI treatment might have been treated as clandestine and may deny as if they do not know such RH problems. Adolescents with knowledge about family planning services were 9 and 13 times more likely to ever and currently use, RH services which could be explained by the fact that family planning services are delivered with a package of general awareness on RH so that those who were exposed to such information are more likely to be motivated for RH services ever or now.

On the other hand, peer groups as sources of RH information were more likely to ever or currently use RH services. This was evidenced by the finding that peer education reaches larger numbers of youth and documented greater increases in health services users (23). Similarly, a study carried out in Addis Ababa; showed that peer education has more coverage than youth centers appear to have limited coverage (24). Printed medias such as posters and pamphlets were also more likely to increase ever or current use of RH services. Printed media is an appealing strategy for

Adolescent Reproductive Health (ARH) programs because of the potential to reach large numbers of youth and to introduce new ideas and the likelihood to increase the use of health services by adolescents. RH-related interventions directed specifically to adolescent audiences, communications research indicates that printed media can be an effective strategy for influencing adult reproductive health behaviors which perhaps holds true for adolescents (25).

In conclusion, this study has found out that majority of adolescents are not utilizing RH services despite the availability of a wide range of service giving centers in the city. It clearly indicates that cultural accessibility may have more importance for utilization of health services than physical accessibility, particularly for adolescent age groups. Interestingly, unlike many other studies, our study showed that the leaner relationship between knowledge of health problems and availability of health services with its utilization. The role of mass and printed media and that of peers had significant positive influence on the use of RH services by the adolescents.

However, much more intensified effort is required to increase the health service utilization for RH by the adolescents who are the prime victims for a range of RH problems for various reasons. More rigorous study that would single out the most pertinent factor(s) may be recommended to enable planners design youth friendly RH services in the city.

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