

REPRODUCTIVE HEALTH SERVICES UTILIZATION AND
ASSOCIATED FACTORS AMONG ADOLESCENTS IN ANCHAR
DISTRICT, WEST HARARGHE ZONE, OROMIA REGION, EAST-
ETHIOPIA

BY: MUSTAFA GELETO (BSc)

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BY: MUSTAFA GELETO (BSc)

Advisors:

1. Challi Jira (MPH, PHD) Professor of Health Services Management
2. Fikru Tafese (BSc, MPH)

Approved by the Examining Board

Examiner _____

Examiner _____

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Abstract

Back ground: *Adolescence generally is a healthy period of life; but many adolescents are less experienced, less informed, and less comfortable in utilizing reproductive health services than adults. However, reproductive health programmes which are available to fill this gap tend to serve primarily urban populations, so the vast majority of young people in the rural areas of Ethiopia remain underserved.*

Objective: *The objective was to assess reproductive health service utilization and associated factors among adolescents in Anchar District, West Hararghe Zone, Oromia Region, East Ethiopia.*

Methods: *A community based cross-sectional study using quantitative and qualitative method of data collection was applied. Simple random sampling method was used for quantitative and Purposive sampling technique used for qualitative. A total of 402 adolescents were interviewed using a pre-tested structured questionnaire. Additionally four focus groups and ten in-depth interviews were conducted. Data were entered into EPI data version 3.1 and then transferred to SPSS version 16.0 for further analysis. Bivariate and multivariable analyses were done for associated factors with reproductive health utilisation at P-values <0.05 and results were presented by tables and graphs. Qualitative data was transcribed compiled manually and result was presented by narration.*

Result: *Forty two (39.3%) female adolescents have ever used family planning; contraceptive uses during first and last sexual intercourse was thirty four (31.8%) and twenty two (20.6%) respectively. From total respondents only one hundred eight four (45.8%) adolescents have ever used VCT services. Fifteen have experienced at least one STI symptom; among them ten have visited health services for treatment. Orthodox Christian followers were three and half times more likely to use family planning than females (AOR=3.45, C.I=1.23,9.68) and those ever discussed about family planning were seven times more likely to use the service than their counterparts 7.03(2.54,19.48). Males were five times more likely to ever use VCT than females (AOR=5.25,C.I=1.07,25.87) and those perceive themselves as high risk for HIV were eight times more likely to ever use VCT than their counterparts(AOR=8.22, C.I=1.065,35.49).*

Conclusion: *More than half of adolescents were not utilizing reproductive health regarding to family planning, and VCT services. Thus, intensified effort is needed to increase utilization of these reproductive health services for adolescents. There should be health promotion activities in every area, to reach different segments of community and improve utilization.*

Key words: *Adolescents, VCT, Reproductive health, Family planning, STI, Utilization*

Table of Contents

Acknowledgements	i
Abstract	ii
Chapter 1: Introduction	1
Chapter 2: Literature review	3
Chapter 3: Significance of Study	15
Chapter 4: Objectives	16
Chapter 5: Methods and Materials	17
5.1 Study area and period.....	17
5.2 Study Design	17
5.3 Source and study Population	17
5.4 Sample Size and Sampling techniques	18
5.5 Variables of the study	20
5.6 Data collection tools and procedures	21
5.7 Data Quality Assurance	23
5.8 Data management and analysis	24
5.9 Operational definitions.....	24
5.10 Ethical considerations	25
5.11 Dissemination plan	25
6. Result.....	26
6.1 Socio-demographic characteristics of the respondents	26
6.2 Adolescents sexual frequency and parental monitoring	28
6.3 Reproductive Health Services Utilization	29
6.4 Factors Associated with reproductive health services utilization.....	36
7. Discussion.....	52
Strength and Limitation of study	57
8. Conclusion and Recommendation	58
References	60
Annexes	65

List of Tables

Table 1: Socio demographic characteristics of the respondents, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013. (N=402)	27
Table 2: Characteristics of respondents regarding to their sexual activity and parental monitoring, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013	29
Table 3: Respondents' characteristics regarding to awareness of family planning services Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013 (N=402)	30
Table 4: Adolescents' lifetime and current utilization of family planning, Anchar district, West Hararghe Zone, Oromia region, East-Ethiopia, March 2013 (N=236)	31
Table 5: Respondents' characteristics regarding to awareness and utilization of STI case management services Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013 (N=402).....	33
Table 6: Characteristics of respondents regarding to VCT service awareness and utilization Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013	34
Table 7: Factors associated with ever use of FP services Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013.....	41
Table 8: Factors associated with contraceptive use during first sexual intercourse, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013	42
Table 9: Association of contraceptive use at last sexual intercourse with independent variables, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013	43
Table 10: Factors associated with ever use of VCT service among adolescent in Anchar district, west Hararghe, Oromia, Ethiopia, March, 2013	45

Acronyms

EDHS- Ethiopian Demographic and Health Survey

FGAE - Family Guidance Association of Ethiopia

FGM- Female Genital mutilation

FP - Family planning

HIV- Human Immunodeficiency Virus

HTP- Harmful Traditional Practices

ICPD- International Conference on Population and Development

MOH- Ministry of Health

RH- Reproductive Health

SRH - Sexual Reproductive Health

STD- Sexually Transmitted Diseases

STI- Sexually Transmitted Infection

VCT- Voluntary Counseling and Testing

WHO- World Health Organization

Chapter 1: Introduction

1.1 Statement of the Problem

World Health Organization defines adolescents as persons with the age group of 10–19 years (1). Adolescent is the period of transition from childhood to adulthood which is characterized by spurts of physical, mental, emotional and social development (2) with experimentation and engagement of a wide range of behaviors(3).

Recently adolescents number is estimated to be 1.25 billion globally (4) of which, 513 million are 15–19 years old(5) and 85% of them in developing countries (6) in which they are most vulnerable to a range of reproductive health problems, including too-early pregnancy and childbearing; unsafe abortion and STIs including HIV(7).

According to the World Health Organization about one half of all HIV infections worldwide occur among people aged 25 years and under and up to 100 million adolescents become infected with a curable sexually transmitted disease, best estimates indicate that about one out of 20 adolescents in the world contract STD each year (5,6,8).

Adolescents' use of contraceptive method is generally low and they are less likely to use condoms than adults because of lack of access and, for girls in particular, the inability to insist on their use and make informed decisions and choices (9). Globally more than 10% of all births or an estimated of 14 million adolescent girls between the ages of 15 and 19 years gave birth every year and within this age category over four million women have abortions, 40% of which are performed under unsafe conditions (7,8,10).

In developing countries there are about 12.8 million births among adolescents aged 15–19 years and a large proportion of these pregnancies are unplanned (11). According to WHO report in Algeria, Bangladesh, Ethiopia, Indonesia, and Nigeria the risk of dying from complications related to pregnancy or childbirth is two times higher for those aged 15 – 19 years, than for women in their mid twenties. Among married women aged 15–19 years in the developing world, only 17 percent currently practice family planning and among unmarried sexually active adolescents, contraceptive use is believed to be even lower (5).

Each year more than 2 million adolescents undergo unsafe abortion and for a variety of reasons adolescents are more likely to seek abortions later in their pregnancies than adult women (7, 8, 10). Studies in sub-Saharan Africa revealed that adolescent women accounted for as many as 60 percent of those hospitalized for abortion complications (10).

Each day 500,000 young people are infected with STI and in Africa the WHO estimates that 60% of all new HIV infections occur in adolescents aged 15-19 years (12). Studies in Nigeria and India showed that majority of adolescents those who contracted STI or other reproductive health problems did not use reproductive health services for several reasons including shame and embarrassment, high cost of service, negative provider attitudes and perceived lack of confidentiality, some feared being ridiculed and discrimination they face by some health service staff in accessing contraceptive, STI services or other services (13).

Many young girls of Ethiopia engage in sex at a relatively early age, and they are unlikely to use contraception: they are therefore vulnerable to unintended pregnancies which is more than one in three births to women aged 15-19 years are unintended at the time of birth (14); 45 percent of the total births in the country occur among adolescent girls and young women with the number of births among women aged 15-19 years is 99 per 1,000 women (15, 16).

Contraceptive use among currently married women show that only 23% of aged 15-19 years use modern contraceptive which is lower compared with other age groups. Current contraceptive use is lower among young women than among those at the intermediate age groups. For example, 5 percent of all women aged 15-19 report current use of any contraceptive method while this proportion increases until it peaks at 29 percent in the 30-34 age groups. And among sexually active youth aged 15-19 years those who have been tested for HIV in the past 12 months were only 23.9% and 26.9% women and men respectively (16). In addition self reported prevalence of STI symptoms among sexually active adolescents aged 15-19 years show that 1.4% and 0.5% women and men respectively have experienced STI symptoms (17). However there was no evidence related to reproductive health services utilization status in the study area. Therefore assessing factors affecting reproductive health services utilization within this age category is very important to improve reproductive health services offered to adolescents and their by reducing adolescent disease burden and complication associated with reproductive health.

Chapter 2: Literature review

2.1 General reproductive health conceptual background

Reproductive health is a state of complete mental, physical and social well-being and not merely the absence of disease or infirmity in all matters relating to the reproductive system and to its functions and processes. Therefore reproductive health implies that people are able to have a safe and satisfying sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so(18).

Reproductive health care is defined as the constellation of techniques, methods, and services that contribute to reproductive health and well-being by preventing and solving reproductive health problems. And also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted infections (19).

In 1994, the International Conference on Population and Development (ICPD) in Cairo, 179 countries agreed on a 20-years programme of action to improve sexual and reproductive health by calling universal access to basic reproductive health services which is appropriate to all age categories. So ICPD have created a range of programmes to better meet the RH needs of adolescents (20). In addition the other concept of the conference was deal with service provision and this provision is not only the ability of service providers to provide a variety of quality RH services but also addressing factors that may inhibit an individual from accessing and utilizing these services(21). And this reproductive health service covers a wide range of services that contribute to reproductive health and well-being by preventing as well as solving reproductive health problems (22). The services include; improving antenatal, delivery, postpartum and newborn care; providing high-quality services for family planning, including infertility services; prevention of abortion and management of its consequences; combating sexually transmitted infections including HIV, reproductive tract infections, prevention, early detection and treatment of breast cancer and cancers of the reproductive system; and active discouragement of harmful traditional practices such as FGM (23).

So it is essential to provide RH services because: access to RH care is a right of the individuals in addition morbidity and mortality related to the reproductive system is a significant public health issue (24). So timely provision of RH services can prevent disease, death and disability related to unwanted pregnancy, obstetric complications, sexual and other forms of gender based violence, HIV infection and a range of reproductive disorders.

For RH services to be equitable, effective and efficient in a humanitarian setting, coordination, communication, community involvement, technical and managerial capacity-building, quality of care and advocacy must occur across agencies (24).

2.2 Adolescent Reproductive health services in Ethiopia

For more than a quarter of a century, health services have been internationally acknowledged as a vital element for improving adolescent sexual and reproductive health. Ideally, adolescent clinical services encompass prevention, diagnosis, and treatment of STIs and HIV, prevention of cervical cancer, and prevention and care during pregnancy and child birth (25).

In Ethiopia regardless of large number of young people, there are few national programs which are specifically targeted towards addressing their most pressing RH needs (26).

With 84 % of the country's youth and adolescents residing in rural areas and only 15 percent enrolled in school, RH programmes which are available to fill this gap are tend to serve primarily urban populations, in which many of whom are also enrolled in formal schooling. So the vast majority of young people in the country remain underserved. Even within urban areas, research suggests that the existing coverage is limited (26, 27).

Additionally, most programs for young people in Ethiopia generally tend to deliver age and gender non specific messages which fail to recognize the distinct needs of girls and boys at different ages, as well as the unique needs of married adolescent girls (27).

This limited access to targeted RH care and services for young people contributes to and exacerbates many of the RH problems like unwanted pregnancy in addition because of the risky, often unprotected nature of their sexual activities, adolescents and youth are most likely to contract HIV and other STIs (26).

One of the goals for Strategies of Reproductive Health of Young People is to meet RH needs through increased access and quality of reproductive health services for adolescents and young people of Ethiopia. So to accomplish this youth centers have been built in several regions in urban areas under the coordination of governmental and nongovernmental organizations (27). The collaboration of International Planned Parenthood Federation (IPPF) created four youth centers in Dire Dawa, Harar, Adama and Yirgalem(28).

In addition FGAE also operates 26 youth centers, 18 clinics, 242 outreach sites and 740 community-based reproductive health outlets. They are providing comprehensive approach to sexual and reproductive health like providing antenatal care, family planning, abortion, HIV prevention and testing, and STI treatment. Their youth centers have libraries and recreation rooms, and get youth involved through drama and volunteer activities (29).

One important strategy in facilitating adolescent access and use of RH services is ensuring that there are a high quality and youth-friendly services within service delivery points (24). But within Ethiopian context a national study conducted by MOH identified providers' attitudes and community norms as a major barrier to the provision of youth friendly services (30).

Some of the characteristics of youth friendly SRH services are, on the provider aspects it includes specially trained, respectful, concern for privacy and confidentiality of their clients: on health facility side it also includes convenient hours, locations and comfortable surroundings; and lastly on program design it involves affordable fees, short waiting times, youth involvement in design and continuing feedbacks as well as availability of wide range of services and necessary referrals (31).

2.3 Utilization of Reproductive Health Services

2.3.1 Family Planning Services Utilization

Adolescent reproductive health in Asia show that among sexually experienced adolescents in Vietnamese college students, only 32 percent of females and 28 percent of males used a contraceptive method at first sexual intercourse (32). Similarly in Dakar among young adults, contraceptive use at time of first sexual experience was less than thirty percent (33). In addition less than 10 percent of adolescents were found to be using any form of contraceptive in India,

Nepal and Pakistan while contraceptive use among adolescents was fairly high (at least 30 per cent) in Bangladesh, Indonesia, Kazakhstan, Sri Lanka, Thailand and Turkey (32).

Study conducted to assess reproductive and sexual health in developing countries showed that among sexually active unmarried adolescents in Sub-Saharan Africa, contraceptive use ranges from 3% in Rwanda to 56% in Burkinafaso (34).

Forty two to sixty eight percent of married and unmarried but sexually active adolescent females in the Latin American and in Bangladesh, Indonesia, Kazakhstan and Turkey reported currently using contraceptives. Among the African countries, there were nine in which contraceptive prevalence was 20–35%, but only that of Namibia reached at least 40%. In Nigeria only 12% of adolescent females have used contraceptives. Overall, current use of contraceptives was higher among sexually active, unmarried adolescents than married youth (38% vs. 60% in Kazakhstan, and 4% vs. 45% in Nigeria) (35).

A cross-sectional study to assess the knowledge and use of contraceptive methods among 2,592 female adolescent students with age group of 12 to 19 year-old in Brazil show that among sexually active girls 62.1% were found to be using some kind of contraceptive (36). Another study in USA consists of women aged 15-24 years show that among sexually active women use of services for contraception were 49.7% (37).

A survey conducted among 33, 943 students aged 15 years from 24 countries which were aimed to identify contraceptive use among sexually active adolescents shows that in England; 82.3% of those who were sexually active reported that they used condoms and/or birth control pills at last intercourse. Condom use only was most frequent and ranged from 52.7% in Sweden to 89.2% in Greece. Dual use of condoms and contraceptive pills was also relatively frequent, ranging from 2.6% in Croatia to 28.8% in Canada (38).

Another survey comprised 3369 men and 4375 women aged 16-44 years conducted in Britain to describe contraceptive service use and identify demographic and sexual behavioural characteristics associated with use (and non-use) of different services show that amongst 16-17-year-olds the proportions reporting non-use of contraceptive services was 13.8% and 31.2%, respectively (39). Household-based survey conducted in Burkina Faso, Ghana, Malawi and Uganda (on 5,955, 4,430, 4,031, 5,112 females and males 12–19-year-olds respectively) which

were aimed to examine on adolescents' use of SRH Services and the barriers they face in accessing such services of care show that ever use of contraceptive method ranged from 43–65% among females and 50–66% among males (40).

A Study conducted in Kenya on sexual initiation and contraceptive use among female adolescents in Kenya indicated that 46.7% of adolescents had ever used contraceptives while the current users of contraceptive were 21.5 % (41).

The study aimed to examine the care seeking determinants among adolescents in Lagos, Nigeria show that 25.5% young people reported to have ever had sexual intercourse among this 59.1% had not used any contraceptive for their last sexual intercourse (42).

A cross sectional survey conducted to assess use of health services and reported satisfaction among 1279 primary school adolescents in Arusha, Tanzania show that from modern health services 1.6% of males and 0.5% of females visit the health services for contraception. In addition 2% of males and 2% of females visit the traditional health services for contraception (43).

A cross sectional study conducted within 750 never-married youth aged 12-24 to assess sexual health experiences of adolescents in three Ghanaian town show that slightly less than half of all sexually experienced respondents used a modern contraceptive (44).

Study conducted within a total of about 219 students aged 15-24 in the Bolgatanga community, Northern Ghana, to assess knowledge, attitude and practices of reproductive health of this adolescent student population show that among 30% of females and 16% of males aged 15–19 years who have had sex, 74.7% of males and 82.1% of females reporting not to use any family planning method (45).

Cross sectional study conducted in Santiago islands-cape Verde on 368 sexually active adolescents aged 13-17 years attending elementary and high school showed that 69.3% reported having used a contraceptive method during the last act of sexual intercourse (46).

A survey which were undertaken among over 1000 adolescents aged 10 to 19 years to examine the coverage and utilization of existing adolescent programs in slum areas of Addis Ababa show

that, among the sexually experienced, 67% of boys and 51% of girls said that they had ever used a condom (47).

A community-based study conducted in Jimma among 1082 adolescents aged between 15 to 19 years to assess accessibility and utilization of reproductive health services show that 41.1%, and 34.7% were ever and current users of reproductive health services respectively. Among ever used one 17.6% of adolescents use family planning service (48).

A cross sectional survey conducted among 766 high school youth 15-24 years old to assess parental characteristics and sexual behaviour of school youth in Bahir Dar town show that among those who were sexually experienced 32.7 percent of them were using condom in their last sexual experience (49).

A cross-sectional, comparative study conducted in East Gojjam zone which were intended to assess and compare reproductive health needs among 1001 rural and urban out-of-school adolescents show that among the sexually active study subjects (which were 45%) modern contraceptive use was found to be only 21% (50).

2.3.2 STI diagnosis and treatment service utilization

A study conducted in USA on the population drawn from the two last cycles of the National Survey of Family Growth, consists of women aged 15–24 (2543 in 1995, 2157 in 2002) also show that among sexually active women use of services for STI treatment in 2002 were 49.7% (37).

A household-based survey conducted in Burkina Faso, Ghana, Malawi and Uganda show that among sexually active adolescents with STIs, the proportion not seeking any care was 0.7% and 0.1 % among females and males respectively in Burkina Faso: 7.9% and 2.8 % among female and male respectively in Ghana, 3.5% and 5 % among female and male respectively in Malawi and 8.6% and 1.8 % among females and males respectively in Uganda. (40).

A cross sectional survey conducted to assess use of health services and reported satisfaction among 1279 primary school adolescents in Arusha, Tanzania show that from modern health

services 0.2% of males and 0.9% of females seek treatment for STI. In addition from traditional health services, 2% of males and 3% of females seek treatment for STI (43).

A survey conducted on 2150 high school students aged 12-14 years in Balkans to examine the uptake of HIV testing and associated predictors show that of sexually active adolescents who thought they might have contracted STI, only 42% had subsequently visited health facility (51).

A population-based survey in slum areas of Addis Ababa also show that 9% of boys reported symptoms of a sexually transmitted infection compared with 4% of girls, among them 66.9% have seek treatment (47).

A community-based study conducted in Jimma among 1082 adolescents aged between 15 to 19 years also show that among ever used one 5% of adolescents use STI treatment service (48).

A mixed-method research in rural Butajira using a cross-sectional survey among 3,743 randomly selected youths aged 15–24 years and in-depth interviews with ten healthcare providers to assess knowledge about common STIs, perceptions, preferences and use of health services for STIs show that among the sexually active youths ($n = 802$), 3.9% reported having at least one STI symptom in the past 12 months, and one-half of them did not seek care from any sources (52).

2.3.3 VCT service utilization

A survey of 2150 high school students aged 12-14 years in Balkans to examine the uptake of HIV testing and associated predictors show that among sexually active youth 5.9% had already been tested for HIV and (1.6%) of nonsexual active youth also reported having been tested for HIV (51).

Population-based household survey in the Eastern Cape Province of South Africa among a sample of 3,374 adults aged 15 years and older to examine attitudes towards voluntary counselling and testing services, patterns of utilization of VCT services and the relationships between HIV/AIDS-related stigma and the use of VCT show that 10.9 % of adults aged 15-24 years were tested for HIV (53).

A nationally-representative household-based survey conducted in Burkina Faso, Ghana, Malawi and Uganda also show that among sexually active adolescents, 2.5%, 2.8%, 3.5% and 10.7% of

females and 1.5%, 1.2%, 4.8% and 2.2% of males in Burkina Faso, Ghana, Malawi and Uganda respectively had received HIV test (40).

A cross-sectional descriptive study aimed to examine the care seeking determinants among adolescents in Lagos, Nigeria show that 25.5% young people reported to have ever had sexual intercourse among this only 1.0% have ever had HIV test done (42).

A study using the 2003 Nigerian National Demographic and Health Survey to examine the regional prevalence, pattern and correlates of VCT for HIV among youths aged 15 to 24 years (3573) in South and North part of Nigeria show that among youths aged 15-19 years uptake of VCT was 1.7% and 3.7% in North and South part of Nigeria respectively (54).

A cross-sectional study among 3743 randomly selected youth aged 15-24 years, in south central Ethiopia, Butajira to assess perception of Ethiopian youth regarding to their risk of HIV show that among those who were aware, only 6% were tested (55).

2.4 Factors affecting reproductive health service utilization

Data from the National Survey of Family Growth were used to examine associations between sexual and reproductive health communication (parental and formal) and service use among 2,326 U.S. women aged 15–19 in 2002 and 2006–2008 show that adolescents' receipt of parental sexual and reproductive health communication was positively associated with their use of services (56).

A survey based on data from a follow-up self completed questionnaire administered by researchers among 5747 teenagers aged 15 to 16 years in 25 schools in UK to assess about their use of sexual health services found that those who start sexual activity are more likely to use services, only having had sexual intercourse once were significantly less likely to have used services than those with more than one experience, girls with more than one sexual partner were almost twice as likely to have used a service than boys with more than one partner. In addition School leavers, those not living with both parents, having a young mother, those with lower parental monitoring, having better awareness of reproductive health service and places where service is obtained was significantly associated with service use (57).

A community-based cross-sectional study conducted in Jimma show that age group of 18 to 19 years were more likely to ever use RH services than those in the age group of 15 to 17 years; on the other hand, adolescents in the households with functional radio and access to newspaper were likely to ever use RH services. In addition 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 (48).

2.4.1 Factors affecting FP service utilization

A study conducted in USA on the population drawn from the two last cycles of the National Survey of Family Growth, consists of women aged 15–24 years show that those who were less educated and daughters of less educated mothers were less likely to have increased their use of services for contraception in addition women with at least one sexual partner were more likely to have sought these services (37). Similarly a cross-sectional, comparative study conducted in East Gojjam zone show that adolescent's mother education remained to be significantly associated with contraceptive use (50).

A cross sectional study conducted in America to describe adolescent utilization of ambulatory health service and its association with socio demographic and health status characteristics show that older females were more likely than middle adolescent females to obtain care for family planning service (58).

A nationally-representative household-based survey conducted in Burkina Faso, Ghana, Malawi and Uganda show that more females than males reported feeling afraid, embarrassed or shy about obtaining contraceptive services, but this difference was only statistically significant in Malawi and Uganda; in Uganda and Malawi (40).

Survey consisted of a household questionnaire of 1,766 women of reproductive age to assess the independent relationships of five indicators of the family planning service environment with individual-level use of a modern contraceptive in Uganda shows that married women had significantly lower odds than never-married women of using a modern contraceptive and women with at least a secondary education had significantly higher odds of contraceptive use than non educated women (59).

Nationally representative survey conducted on 3453 Kenyan female adolescents to assess their sexual initiation and contraceptive use showed that educational status, marital status, household economic status and listeners of radio were associated with ever use of contraceptives (41).

A community-based cross-sectional study conducted in Jimma show that knowledge about types of RH services showed significant association with ever use like adolescents with awareness of family planning service was 9 times more likely to ever use RH services (48).

2.4.2 Factors affecting STI diagnosis and treatment service utilization

A study conducted in USA on the population drawn from the two last cycles of the National Survey of Family Growth, consists of women aged 15–24 years show service use including STI treatment was associated with household income, number of partners, personal and mother's level of education; In particular women not in the school were less likely to report using these services, the same was true for women who were less educated or had less educated mothers. Conversely, women with at least one sexual partner were more likely to have sought these services (37).

A nationally-representative household-based survey conducted in Burkina Faso, Ghana, Malawi and Uganda also show that more females than males reported feeling afraid, embarrassed or shy about obtaining STI treatment, but this difference was only statistically significant in Malawi and Uganda; in Uganda and Malawi, females were more likely than males to perceive provider-specific barriers like privacy, not being respected or not being treated nicely by staff in terms of STI treatment (40).

A community-based cross-sectional study conducted in Jimma show those adolescents who had awareness of STI treatment service as components of RH services were less likely to ever use RH services (48).

2.4.3 Factors affecting VCT service utilization

A study conducted in USA on the population drawn from the two last cycles of the National Survey of Family Growth, consists of women aged 15–24 show VCT service use was associated with number of partners, personal and mother's level of education; In particular women not in

the school were less likely to report using these services, the same was true for women who were less educated or had less educated mothers. Conversely, women with at least one sexual partner were more likely to have sought these services (37).

Population-based household survey in the Eastern Cape Province of South Africa among a sample of 3,374 adults aged 15 years and older to examine attitudes towards VCT services and patterns of show that educational status were positively associated with VCT service utilization (53).

A study by using the 2003 Nigerian National Demographic and Health Survey to examine the regional prevalence, pattern and correlates of VCT for HIV among youths aged 15 to 24(3573) in South and North part of Nigeria show that females in the study were less likely to go for VCT, youths who are employed are more likely to go for voluntary testing for HIV than those not working in addition, the higher the level of education, the more likely the uptake of VCT and those with low and high perception of risk are more likely to go for VCT than those with perception of no risk for HIV (54).

A survey among randomly selected (550) 16-19-year-olds in Ndola, Zambia, to examined how individual, relational and environmental factors related to adolescent demand for HIV voluntary counseling and testing show that discussing HIV testing with family members, sexual partners, peers and sexual experience was strongly associated with uptake of VCT service (60).

A community-based study conducted in Jimma show that knowledge about types of RH services showed significant association with ever use like adolescents with awareness of VCT services was 3 times more likely to ever use RH services (48).

A study among 3743 randomly selected youth aged 15-24 years, in south central Ethiopia, Butajira to assess perception of Ethiopian youth regarding to their risk of HIV show that married youth, and literate were more likely to be tested for HIV than their counterparts (55).

2.5 Conceptual Framework for adolescent reproductive health utilization

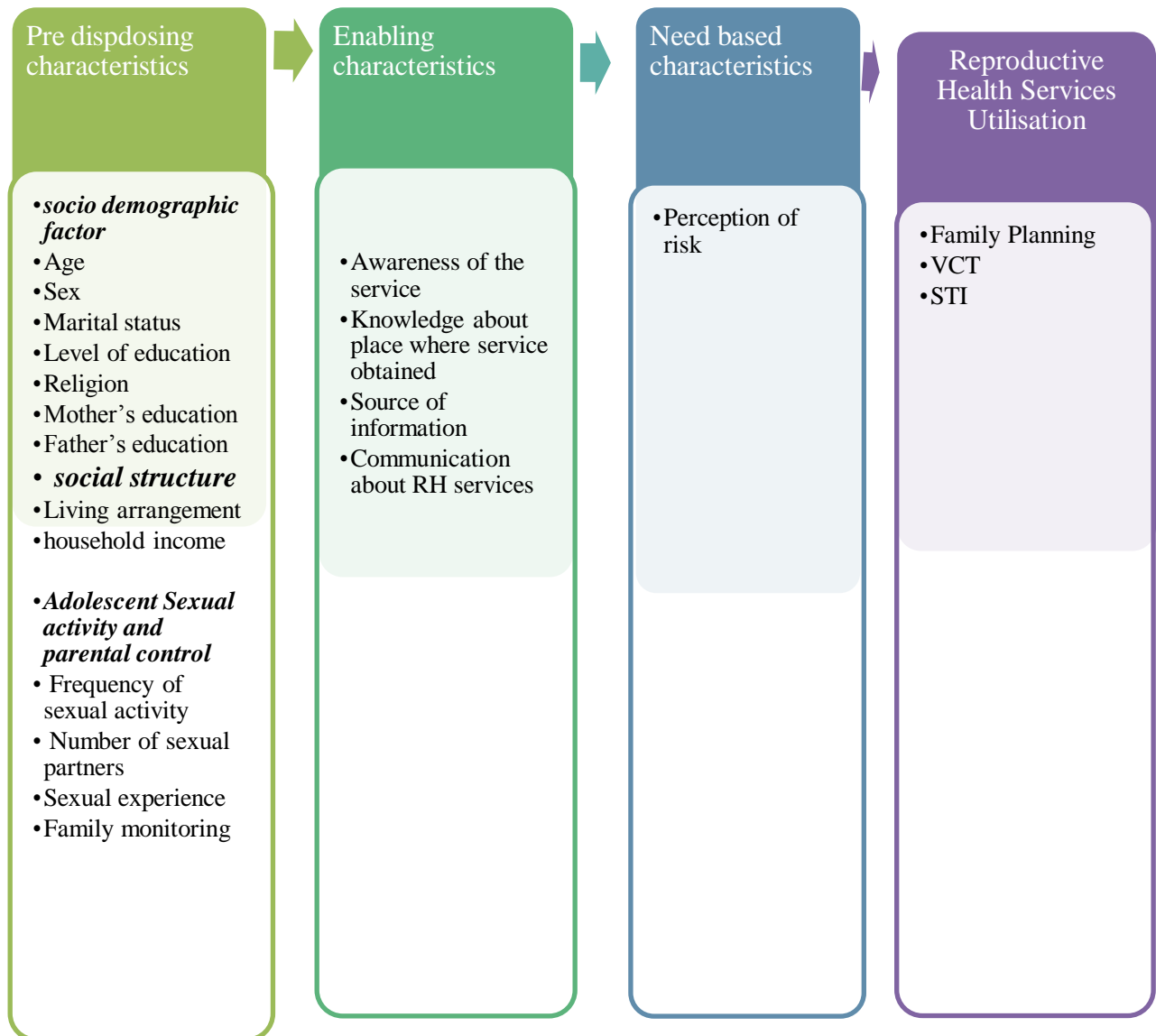


Figure 1: conceptual framework for adolescent reproductive health utilization adapted from Ronald M. Andersen 1995

Chapter 3: Significance of Study

Even if health services are accessible & acceptable, not all groups of adolescents can get the health services they need. Unless they are approached, the reproductive health problems facing Ethiopian adolescent threaten to retard the country's development even further in addition addressing adolescent health, especially reproductive health issues would contribute to reduction of total fertility rate (TFR), maternal mortality rate (MMR) and infant mortality rate (IMR) in the country and thus contribute in achieving the national millennium development goal specially MDG4 and MDG5.

So for designing a proper planning of appropriate reproductive health services and service strategies for adolescents, it is crucial to have knowledge on the pattern of their use and factors associated with their utilization.

This study will assess adolescent reproductive health utilization in rural setting and factors that affects its utilization which is important in reducing adolescent disease and disability burden that was associated with reproductive health.

After conducting this study it will bring better understanding of adolescent services utilization patterns and associated factors for use or non use of the services for programme managers and give attention to rural adolescent reproductive health services utilization. In addition it will put baseline for emphasis on social factors that affects or hinders utilization of services and plan on those factors to bring behavioral change as well as reaching rural community with full range of reproductive health services.

Chapter 4: Objectives

4.1 General objective

- ❖ To assess adolescents reproductive services (VCT, STI, FP) utilization and associated factors in Anchar district, West Hararghe zone, Oromia region from February-May, 2013.

4.2 Specific Objectives

- ❖ To assess magnitude of family planning services utilization among adolescents
- ❖ To assess STI diagnosis and treatment service utilization among adolescents
- ❖ To assess magnitude of HIV VCT service utilization of adolescent
- ❖ To identify factors associated with Family Planning, STI case management and VCT services utilization

Chapter 5: Methods and Materials

5.1 Study area and period

The study was conducted from March 1 to 30, 2013 in Anchar district. Anchar district is found in Oromia regional state west Hararghe zone east Ethiopia, 300 KM from Addis Ababa and 126 KM from zonal capital Chiro. According to the 2007 Ethiopian Housing and Population census, Anchar district has an estimated total population of 96,382 in 2013 residing in 26 kebeles. Boundaries of woreda line with Daro Labu and Aseko districts in east and south east, Measo and Guba Koricha districts in the east and north east; and Aseko and Fantale districts in the south and south west.

Agriculture is the main source of income; among agricultural products Maize, shorghum and Khat were predominant. Topographically 69% of the district is *Kolla*, followed by *Dega* (18%) and *weyna dega* (13%). The district has altitude ranging from 920 to 3220 Meters, and bimodal rainfall pattern with annual rainfall ranging from 900mm to 1200mm. Regarding to health system there are five health centers, twenty three health posts and five private clinics; the potential health service coverage of the district is more than 100% in year 2012/2013.

5.2 Study Design

A community based cross-sectional study using both qualitative and quantitative data collection methods.

5.3 Source and study Population

5.3.1 Source Population

Source population were all adolescents aged 15-19 residing in Anchar district

5.3.2 Study Population

Selected adolescents aged 15-19 years by using simple random sampling.

Inclusion and Exclusion criteria

Inclusion criteria: - Adolescents with age of 15-19 years reside in Anchar district.

Exclusion Criteria: - Adolescents who are severely ill, unable to speak and hear were excluded.

5.4 Sample Size and Sampling techniques

5.4.1 Sample size determination

For quantitative data collection

The sample size was determined by using a single population proportion formula considering the following assumptions:

Proportion of family planning service utilization by taking 50% proportion ($p = 0.5$),

Level of significance to be 5% ($\alpha = 0.05$), $Z_{\alpha/2} = 1.96$ and,

Margin of error to be 5% ($d = 0.05$).

The formula for calculating the sample size is,

$$n = \frac{(z_{\alpha/2})^2 * P(1-P)}{d^2} = \frac{1.96^2 * 0.5 * 0.5}{(0.05)^2}$$
$$n = 384.16 \cong 384$$

By adding 10% non response rate, the final sample size was **422**

For qualitative data collection

Four focus groups each with total of 32 members were created with sex match 2 in school and 2 in out of school. Additionally 10 individuals: 6 from health professionals, 2 from religious leaders and 2 from school were selected for in-depth interview. Both of them selected purposefully and based on the assumption of theoretical saturation of idea.

5.4.2 Sampling techniques

Initially lists of all adolescents aged between 15-19 years that was collected per kebeles were obtained from woreda administration office, and aggregated to get sampling frame of adolescents at woreda level. The serial number was given for all adolescents as an identification number. Then serial number was entered into computer and adolescents correspond to generated serial number by computer using random number generation techniques were included in the sample. Selected adolescent in the sample were interviewed by using structured pre-tested questionnaire; for those adolescents not found at home three visits were made and finally considered them as non-respondent for those not obtained after three visits.

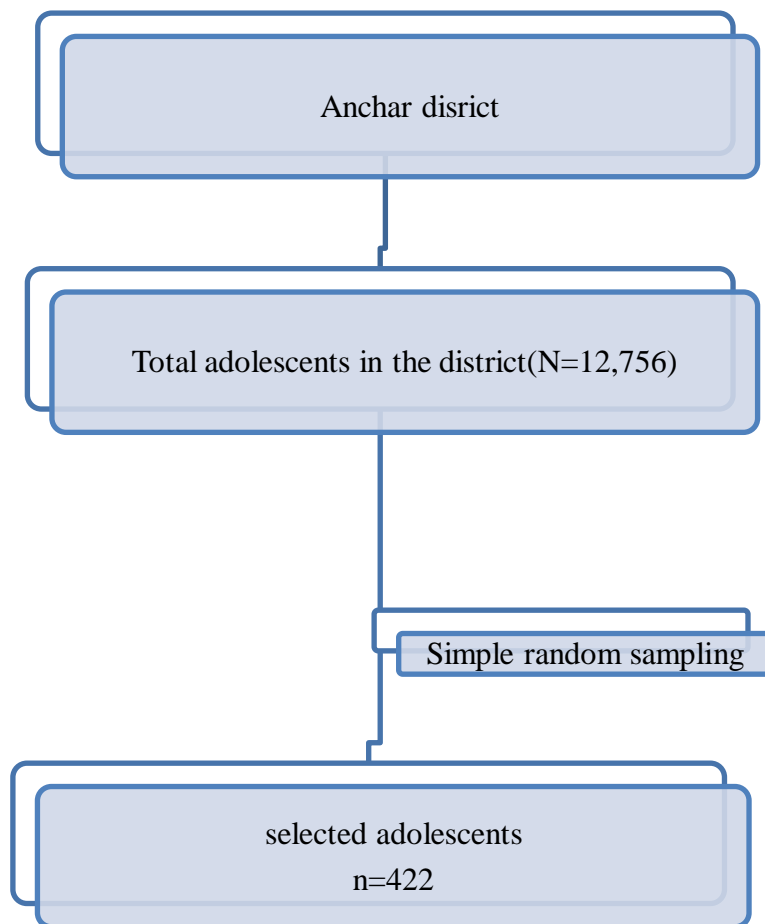


Figure 2: schematic presentation of sampling procedure for selection of adolescents aged 15-19 years

5.5 Variables of the study

Dependent /Outcome variable:

Adolescents' reproductive health service utilization (FP, STI, VCT)

Independent variables:

Socio demographic factors:

Age of adolescent

Sex of the adolescent

Marital status of adolescent

Adolescent school status

Adolescent educational status

Age of the mother

Mother educational status

Age of father

Father's educational status

Household income

Living Arrangement

Source of information

Adolescent sexual activity and parental monitoring:

Sexual experience

Frequency of sexual experience

Number of sexual partners

Other factor:

Perception of risk

Parental monitoring

Individual communication factors:

Awareness of the service

Awareness about place where service obtained

Source of service information

Discussion about RH services

5.6 Data collection tools and procedures

5.6.1 Data collection tool

For quantitative

Quantitative data was collected by using a structured and pre-tested interviewer based questionnaire. After reviewing different literatures that could address the objective of the study, variables are gathered and adapted from similar studies (16,34,36,38,40,48,51,56). The statements and questions addressing variables were posed and arranged according to the particular variables they address. After reviewing many times final version of English questionnaire were developed. Then the questionnaire was translated into Afan Oromo by individual who have good ability of both languages. Another individual who have good ability in Afan Oromo and English was translated the Afan Oromo version into English to check inconsistencies or distortion in the meaning of words.

For Qualitative

Semi-structured open ended in-depth interview and FGD guide were designed having five sections in order to support the response obtained through structured questionnaire on the adolescent reproductive health utilization (FP, STI Case management, VCT).

5.6.2 Data Collection Procedure

Recruitment and training process

Ten data collectors of equal number in sex (five males and five females) who are adolescents, completed grade ten or twelve and could speak local language (Afan Oromo) were hired for data collection. Additionally three supervisors who were diploma Nurses and have previous experience in data collection were recruited. After recruiting both interviewers and supervisors two days intensive training was given before the actual work about the aim of study, study procedures, and data collection techniques go through the questionnaires question by question, art of interviewing sensitive question, ways of collecting the data and clarification was given on each questions. Practical exercise was made through peer interviewer.

Criteria for selection of data collectors:

- Being adolescents aged between 15-19 years, grade ten or twelve complete, Know local language
- Known to be honest, willingness to cope up challenges may face during interview
- Know well about study area and good understanding of question during training (best performance)
- Previous experience was as priority

Pre-testing

The questionnaire was pre tested in Sirba Balew Kebele which is found in Measo woreda and nearest to Anchar Woreda with similar socio-demographic characteristics with people in the study area. A total of 25 respondents were interviewed. On average, it took 30 minutes (range from 25to 45 minutes) to complete the interview. Both the interviewers and supervisors assessed clarity, understandability, and completeness of the questions, and then the results were edited and coded.

Data Collection

After pre-test result completed discussion has been made with data collectors and supervisors, then woreda was subdivided into three sub-districts. Two supervisors together with three data collectors each took one sub-district; the third were covered by four data collectors together with

one supervisor. Then the data was collected using house-to-house face to face interview questions. The study was conducted from March 1 to 22, 2013.

Supervision

During the actual data collection each supervisors were assigned for three data collectors, the rest four data collectors were supervised under one supervisor. The supervisors had checked the activities of each data collectors by walking with them in each kebele and sometimes-random spot-checking of the households. Each night the supervisors had checked all the filled questionnaires for completion and clarity. Incomplete and unclear questionnaires were returned back to the interviewers next morning to get it corrected. The principal investigator randomly checked at least 5% of the supervisors' work each day for completeness and relevancies.

Qualitative data collection

The principal investigator moderated discussion of male groups and male supervisor were used as note taker. For female discussants female supervisors were used as moderator and note taker after giving one day practical training at Cheleleka Health Center. Group discussions with their respective discussants were conducted in Kebele administration office and secondary school. For in-depth interview respective respondents were asked for their free time and interview was made in their respective places when they are free without interrupting their regular activities. Both FGD and in-depth interview were conducted by using respective guide. Each discussion was tape recorded not to miss all issues discussed. The qualitative data collection was conducted from March 26-30, 2013.

5.7 Data Quality Assurance

Data quality was assured by proper designing and pre-testing, coding and categorization of questionnaire. The data collector and supervisors were trained for two days particularly in the proper filling of questionnaire, and how to deal with sensitive questions. Additionally sex and age matched data collectors were used to minimise social desirability bias. The questionnaire was prepared in English and then translated in to Afan Oromo and back translated to English by another person who has good command of English and Afan Oromo to check for its consistency.

Moreover the data collectors were instructed to check completeness of each questionnaire at the end of every interview, and close supervision was made by supervisors. Each completed questionnaire was checked to ascertain all questions were properly filled and corrected by principal investigator. The information was rechecked in a randomly selected sub sample (5%).

5.8 Data management and analysis

All returned questionnaires were checked for completeness, cleaned manually, coded and entered into epidata version 3.1 and then exported to SPSS windows version 16.0 for further analysis. Frequencies were used to summarize descriptive statistics of the data; and tables and graphs were used for data presentation. Logistic regression and fisher exact test were considered for analysis because the outcome variables are categorical and dichotomous. Bivariate analysis was used primarily to check which variables have association with the dependent variable individually. Furthermore variables were entered in to Multiple Logistic regression for controlling the possible effect of confounders. P-value < 0.05 was considered as significance and finally the variables which have significant association with reproductive health services utilization were assessed by using odds ratio at 95% CI. For qualitative findings data was first transcribed, edited, and compiled manually. The results were presented by narration to complement the evidence from quantitative result.

5.9 Operational definitions

Adolescent: for the purpose of this study, adolescence is considered to encompass ages ranging from 15 to 19 years which is most likely to engage with sexual activity.

Ever used family planning: Those who used any types of contraceptives at least once in their life time

Ever used VCT service: Adolescents who visited VCT service at least once their life time

Ever used STI Case management Service: Those who were experienced at-least one STI symptoms and seek treatment

Contraceptive use at the first sexual intercourse: those who used any types of contraceptives at their first sexual intercourse.

Contraceptive use at the last sexual intercourse: those who used any types of contraceptives at their last sexual intercourse.

Parental monitoring: when respondent answers mean value and above to the four questions rose to assess parental monitoring, it will considered as high parental monitoring and similarly when respondent answers below mean value it will considered as low parental monitoring.

Sexually active: refers to involvement in sexual intercourse with in the last 12 months.

5.10 Ethical considerations

Ethical clearance was obtained from the Ethical review committee of College of Public Health and Medical Sciences, Jimma University. Communication with the different District and Kebele administrators were made through formal letter obtained from the Jimma University. After the purpose and objective of the study have been informed, verbal consent was obtained from each study participants and from either parent (mother or father) if they agree of interviewing their son or daughter. Participants were also informed that participation is voluntary basis and they can withdraw from the study at any time if they are not comfortable about the questionnaire. In order to keep confidentiality of any information provided by study participants, the data collection procedure were anonymous and adolescents were informed to assure that neither their friends nor their parents would have access to their responses.

5.11 Dissemination plan

The findings of this study will be presented for partial fulfillment in Master of Public Health in Services Management to Department of Health Planning and Services Management, Jimma University College of Public Health and Medical Sciences, and the copy will be sent to Oromia Regional Health Bureau, West Hararghe Health Office, and Anchar District Health Office. An attempt will be made to present the findings in different conferences and workshops and will be sent to publication on scientific journals.

6. Result

Quantitative Findings

Four hundred two adolescents aged 15-19 years were participated in the study 95.3% response rate.

6.1 Socio-demographic characteristics of the respondents

Two hundred twenty one (55%) of the respondents were male, one hundred twenty three (30.6%) were seventeen years of age and three hundred sixty (82.1%) were never married. Two hundred forty six (61.2%) were Muslims and one hundred twenty (29.9%) were Orthodox. Of total respondents three hundred twenty nine (81.8%) are currently in the school, three hundred fifty eight (89%) attended formal education and one hundred ninety one (47.5%) of them attended secondary school and above.

From the total respondents two hundred forty eight (61.7%) adolescents live with both parents while eighty three (20.6%) live alone. Three hundred forty two (85%) respondents' mothers have not attended formal education. Out of these three hundred thirty five (83.3%) mothers were could not read and write. Similarly two hundred sixty three (65.5%) of respondents fathers have not attended formal education; of them two hundred thirty seven (59%) of fathers were could not read and write.

The median estimated monthly income of the family was 800.00 birr, with range between 105 birr and 5000 birr, 46.5% of the families earned below the average. The median age of mothers and fathers was 40 and 45 with range between 28 years and 65 years, and 31years and 76 years respectively. Most of (two hundred eighty one) respondent's mothers' age were between 35 and 44 years while two hundred two respondent's fathers' age was between 40 and 49 years.

Regarding to source of information in the house three hundred and twenty seven (81.3%) respondents have functional radio and forty seven (11.7%) have functional television. The details of selected socio demographic characteristics are summarized in Table1.

Table 1: Socio demographic characteristics of the respondents, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013. (N=402)

Variables	Frequency	Percent (%)
Sex		
male	221	55.0
female	181	45.0
Age		
15 years	59	14.7
16 years	85	21.1
17 years	123	30.6
18 years	79	19.7
19 years	56	13.9
Marital status		
Never married	330	82.1
Ever married	72	17.9
Religion		
Muslim	246	61.2
Orthodox	120	29.9
Catholic	33	8.2
Protestant	3	.7
Schooling status		
in school	329	81.8
out of school	73	18.2
Educational status		
unable to read and write	35	8.7
can read and write	9	2.2
1-8	167	41.5
9 th and above	191	47.5
Living arrangement		
live alone	83	20.6
with both parents	248	61.7
with father	8	2.0
with mother	14	3.5
with relatives	21	5.2
others*	28	7.0
Mother educational status		
unable to read and write	335	83.3
can read and write	7	1.7
1-8	43	10.7
9 th and above	17	4.2

Father educational status		
unable to read and write	237	59.0
can read and write	26	6.5
1-8	102	25.4
9 th and above	37	9.2
Age of mother		
≤34 years	25	6.2
35-39 years	133	33.1
40-44 years	148	36.8
≥45	96	23.9
(Mean ±SD=40.6±5.6)		
Age of father		
≤39	50	12.4
40-44	107	26.6
45-49	115	28.6
≥50	130	32.3
(Mean± SD= 46.79± 7.6)		
Income		
≤650	101	25.1
651-800	111	27.6
801-1124	90	22.4
≥1125	100	24.9
Source of information in the house		
functional radio	327	81.3
functional television	47	11.7
functional telephone	25	6.2
news paper	1	.2
other**	2	.5

*with husband/wife

** Internet service

6.2 Adolescents sexual Activity and parental monitoring

From the total respondents two hundred thirty six (58.7%) have ever had sexual partner, and among them two hundred twenty five (95.3%) had only one partner. Two hundred thirty six (58.7%) were sexually experienced; out of them two hundred one (85.2%) had had sexual intercourse more than once with similar partner in their life time. Two hundred twenty five

(56.0%) adolescents were sexually active in the past twelve months. Regarding to parental monitoring three hundred forty two (85.1%) reported that they were highly followed by their parents (Table 2).

Table 2: Characteristics of respondents regarding to their sexual activity and parental monitoring, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013

Variables	Frequency	Percent (%)
Sexual partner(N=402)		
Yes	236	58.7
No	166	41.3
Number of sexual partner (N=236)		
One	225	95.3
More than one	11	4.7
Ever had sexual intercourse(N=402)		
Yes	236	58.7
No	166	41.3
sexual intercourse in the past 12 months(N=402)		
Yes	225	56.0
No	177	44.0
Number of sexual intercourse you ever had(N=236)		
Once	24	10.2
More than once with same partner	201	85.2
More than once with different partner	11	4.7
parental monitoring(N=402)		
High	342	85.1
Low	60	14.9

6.3 Reproductive Health Services Utilization

6.3.1 Family planning service awareness and utilization

Three hundred sixty seven (91.3%) adolescents have ever heard about family planning, three hundred sixty (89.6%) have awareness about the place where family planning is given and two hundred sixty five (65.9%) have ever discussed about family planning. Among them one hundred three (38.9%) discussed with their sexual partner and eighty six (32.5%) discussed with

their friends. Two hundred seventy six (75.2%) adolescents responded radio as source of information while sixty six (18%) responded health workers as primary source of information. For detailed information see table 3.

Table 3: Respondents' characteristics regarding to awareness of family planning services Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013 (N=402)

Variables	Frequency	Percent (%)
Ever heard about family planning service		
Yes	367	91.3
No	35	8.7
Knowledge about place where family planning services given		
Yes	360	89.6
No	42	10.4
Discuss about family planning		
Yes	265	65.9
No	137	34.1
Discussed with whom (N=265)		
parents	26	9.8
peer groups/friends	86	32.5
sexual partner	103	38.9
teachers	46	17.4
others*	4	1.5
Source of information(N=367)		
Radio	276	75.2
Television	14	3.8
News paper	1	0.3
Peer groups/friends	3	0.8
Teacher	7	1.9
Health workers	66	18

*counselor, sister

From the total female adolescents who had sexual intercourse in their lifetime forty two(39.3%) have ever used family planning services and thirty four(31.8%) have used contraceptive during their first sexual intercourse while only twenty two(20.6%) adolescents used contraceptives in

their last sexual intercourse. Information about family planning utilization was illustrated in table 4.

Table 4: Female adolescents' lifetime and current utilization of family planning, Anchar district, West Hararghe Zone, Oromia region, East-Ethiopia, March 2013 (N=107)

Variables	Frequency	Percent (%)
Ever used family planning		
Yes	42	39.3
No	65	70.7
Contraceptive use during their first sexual intercourse		
Yes	34	31.8
No	73	68.2
Contraceptive use during their last sexual intercourse		
Yes	22	20.6
No	85	79.4
Reason for not utilizing the service(N=76)		
Too young	4	5.3
Feel afraid/embarrassed to get service	4	5.3
Lack of knowledge how to use contraception method	18	23.7
Religious opposition	21	27.6
Opposition from sexual partner	9	11.8
Fear of side effects	2	2.6
Lack of preferred methods	6	7.9
Lack of privacy by health workers	12	15.8

For those who have not utilized family planning services; eighteen (23.7%) lack of knowledge how to use contraception method, twenty one (27.6%) religious opposition and twelve (15.8%) lack of privacy by health workers reported as a reason.

6.3.2 STI Case Management Service awareness and utilization

From total adolescents who have participated in the study three hundred thirty six (83.6%) have heard about STI case management services, three hundred twenty one (79.9%) have awareness

about the place where STI case management service given and two hundred forty seven (61.6%) have discussed about STI cases management services.

Regarding to source information for STI case management service utilization two hundred thirty one (68.8%) adolescents responded radio and forty four (13.1%) responded health workers as primary source of information. But only twenty one (6.2%) adolescents responded teachers as source information for STI case management service utilization.

From the total respondents fifteen of them have an experience of at least one of the STI symptoms, out of them ten have sought STI treatment services while the rest have not attended any STI treatment services. The only responded reason for not seeking the service was feeling of afraid or being embarrassed to get the service. The detailed information about STI case management service utilization was illustrated in the table 5.

Table 5: Respondents' characteristics regarding to awareness and utilization of STI case management services Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013 (N=402)

Variables	Frequency	Percent (%)
Ever heard about STI case management service		
Yes	336	83.6
No	66	16.4
Awareness about place where STI case management services available		
Yes	321	79.9
No	81	20.1
Ever Discussed about STI case management		
Yes	247	61.4
No	155	38.6
Source of information(N= 336)		
Radio	231	68.8
Television	26	7.7
News paper	8	2.4
Peer groups/friends	6	1.8
Teacher	21	6.2
Health workers	44	13.1
Have experience of the following symptoms		
Burning sensation during urination	7	1.7
Bad smelling genital discharge	4	1.0
Genital ulcer/sore	3	.7
Itching around genitalia	1	.2
Did not experience any of above symptoms	387	96.3
If have the above symptoms have seek the service		
Yes	10	66.7
No	5	33.3
Reason for not seeking the service		
Feel of afraid/embarrassed	5	100

6.3.3 VCT Service awareness and utilization

Three hundred seventy seven (93.8%) have ever heard about both VCT service and place where VCT service provided while three hundred (74.6%) have discussed about VCT service. Two

hundred forty four (64.6%) and ninety nine (26.3%) adolescents responded radio and health workers as primary source of information respectively.

Out of the total respondents two hundred sixty one (64.9%) have perceived that they at risk of contracting HIV/AIDS and among them eight two (31.5%) perceived that they are at high risk.

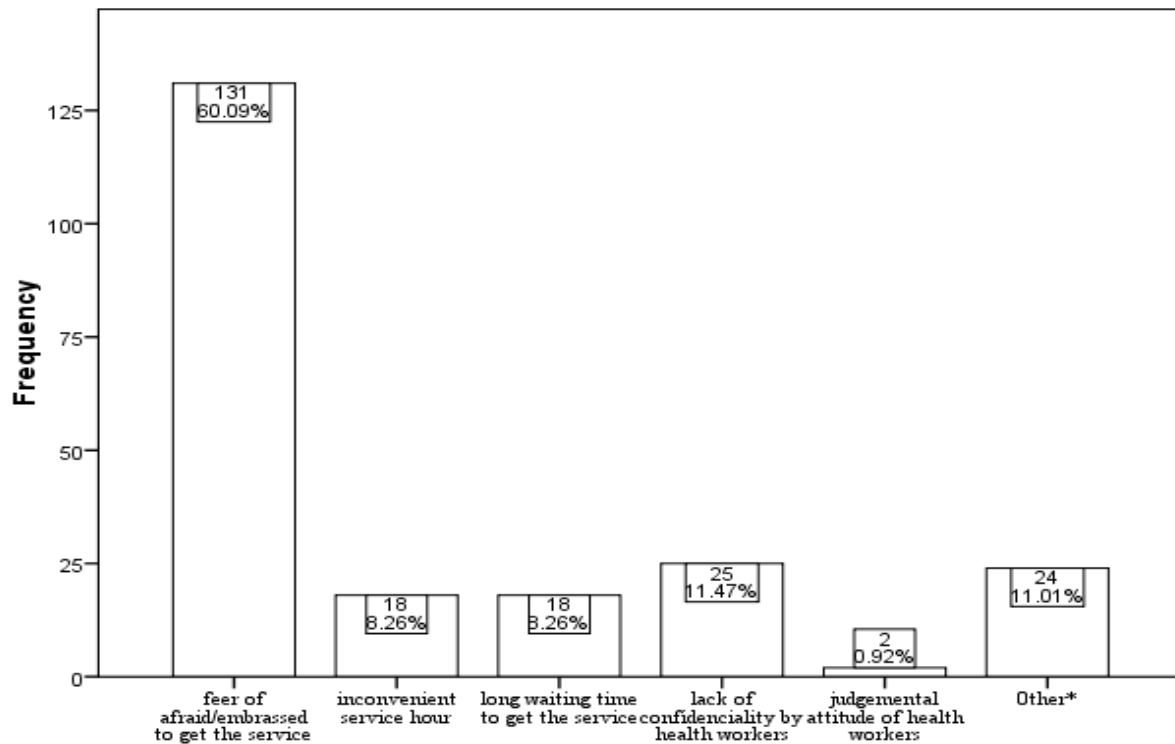
Table 6: Characteristics of respondents regarding to VCT service awareness and utilization Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013

Variables	Frequency	Percent (%)
Ever heard about VCT service		
Yes	377	93.8
No	25	6.2
Awareness about place where VCT services available(N=402)		
Yes	377	93.8
No	25	6.2
Ever Discussed about VCT(N=402)		
Yes	300	74.6
No	102	25.4
Source of information(N=377)		
Radio	244	64.6
Television	12	3.2
News paper	2	.5
Peer groups/friends	9	2.4
Teacher	11	2.9
Health workers	99	26.3
Perception of risk for HIV(N=402)		
yes	261	64.9
no	141	35.1
Magnitude of risk (N=261)		
High	82	31.5
low	178	68.5
Ever utilized VCT service		
Yes	184	45.8
No	218	54.2
Where you get the service(N=184)		
Health center	177	96.2
Private clinic	3	1.6
others*	4	2.2

* In the school, at the health post

Among the adolescents participated in the study one hundred eighty four (45.8%) of them have ever used VCT service. One hundred seventy seven (96.2%) adolescents obtained the services from the health center (Table 6).

Among those have not utilized the service one hundred thirty one (60.1%) responded feel of afraid/embarrassed and twenty five (10.5%) responded lack of confidentiality by health workers as reason for not utilizing. The detailed reasons were displayed in the Figure 3.



*Too young to use service, lack of knowledge about service

Figure 3: Reason for not utilizing VCT services by adolescents, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, May 2013

6.4 Factors Associated with reproductive health services utilization

Bivariate Analysis

6.4.1 Factors associated with family planning services utilization

Crude analysis of socio-demographic variables on binary logistic regression showed that religion was significantly associated with ever use of family at $p < 0.05$. On the other hand age, educational status, marital status, schooling status, house hold income, father educational status, mother educational status, source of information in the house and living arrangement of respondents have no statistical association with ever use of family planning.

Among adolescent sexual activity and parental monitoring variables parental monitoring has significant association with ever use of family planning at $p < 0.05$. On the contrary number of sexual partner in lifetime and sexual intercourse in past 12 months has no significant association with ever use of family planning service.

Moreover, ever discussion about family planning has significant association with ever use of family planning service by adolescents at $p < 0.05$, but awareness about place where family planning service provided and awareness about family planning services have no significant association with ever use of family planning.

Orthodox Christian followers were more than two and half times more likely to ever use family planning than Muslims (COR=2.70, C.I=1.15,6.33, $p=0.023$). Adolescents who were highly monitored by their parents were more than three and half times more likely to ever use family planning than their counterparts (COR=3.74, C.I=1.47,9.77, $P=0.006$). Finally adolescent who ever discussed about family planning were eleven times more likely to ever use family planning compared to those never discussed (COR=11.25, C.I=4.28,29.62, $P=0.000$).

Among socio demographic variables religion and father educational status were significantly associated with contraceptive use at the first sexual intercourse at $p < 0.05$. On contrary educational status, marital status, schooling status, mother educational status, family income,

living arrangement and source of information in the house were all not significantly associated with contraceptive use at first sexual intercourse.

All adolescent sexual activity and parental monitoring variables were not significantly associated with contraceptive use at first sexual intercourse ($P > 0.05$). Ever discussion about family planning were significantly associated with contraceptive use at first sexual intercourse at $P < 0.05$, but having awareness about place where family planning provided and awareness about family planning service were not significantly associated.

Orthodox Christian followers were almost four times more likely to use contraceptive at their first sexual intercourse than Muslims ($COR = 3.98$, $C.I = 1.60, 9.88$, $P = 0.003$). Adolescents whom their father attended formal education were almost three times more likely to use contraceptive at first sexual intercourse compared to those their father not attended formal education ($COR = 2.81$, $C.I = 1.17, 6.75$, $P = 0.02$). Finally adolescents who ever discussed about family planning were six times more likely to use contraceptive at their first sexual intercourse than their counterparts ($COR = 6.20$, $C.I = 2.83, 16.12$, $P = 0.001$).

All socio-demographic factors such as educational status, schooling status, religion, house hold income, father educational status, mother educational status, source of information in the house and living arrangement of respondents have no statistical association with contraceptive use at their last sexual intercourse. Similarly all adolescent sexual activity and parental monitoring variables have no significant association with contraceptive use at their last sexual intercourse.

Finally ever discussion about family planning was significantly associated with contraceptive use at first sexual intercourse at $p < 0.05$, but awareness about place where family planning service provided and awareness about family planning service was not significantly associated.

Adolescents who ever discussed about family planning were almost six times more likely to use contraceptive at last sexual intercourse compared to those not discussed ($COR = 5.84$, $C.I = 1.82, 18.72$, $P = 0.003$).

6.4.2 Factors associated with STI case management service utilization

For STI case management service utilization fisher exact test was used to establish association due to small count in outcome variable. All socio demographic variables; sex, age, marital status, religion, schooling status, educational status, mother educational status, father educational status, income, living arrangement and source of information in the house have no significant association with utilization of the service at $P < 0.05$.

Similarly adolescent sexual activity and parental monitoring variables like having sexual partner, number of sexual partner in life time, sexual intercourse, sexual intercourse in the past twelve months, sexual frequency and parental monitoring were not significantly associated with STI case management service utilization at $P < 0.05$.

Additionally awareness about the service, knowledge about place of the service and having discussed about STI case management service all have no significant association with STI case management service utilization at $p < 0.05$.

6.4.3 Factors associated with VCT service Utilization

From socio-demographic characteristics on binary logistic regression sex and educational status have significant association with ever use of VCT service while marital status, religion, schooling status, mother educational status, father educational status, living arrangement and source of information in the house have no significant association with ever use of VCT service at $P < 0.05$.

On the other hand from adolescent sexual activity and parental monitoring variables having sexual partner, ever had sexual intercourse and having sexual intercourse in the past 12 months were significantly associated with VCT service utilization at $P < 0.05$. But number of sexual partner in life time, number of sexual intercourse and parental monitoring were not significantly associated with VCT service utilization.

Similarly discussion about VCT, perception of risk for HIV/AIDS and magnitude of perception of risk were significantly associated with utilization of the service at $P < 0.05$. On the contrary

source of information, awareness about VCT service and place of VCT service were not significantly associated with ever use of VCT service.

Males were two times more likely to ever use VCT service compared to females (OR=2.03, P=0.001, C.I=1.36, 3.04). Adolescents who were secondary school and above were two time more likely to ever use VCT service compared to those unable to write and read(OR=2.11, P=0.049, C.I=1.01, 4.44).

On the other hand, adolescents who have sexual partner were more than three and half times more likely to ever use VCT service compared to those did not have (OR=3.6, P=0.00001, C.I=2.35, 5.61). Similarly those who had sexual intercourse were four times more likely to ever use VCT service compared to those do not have (OR=4.12, P=0.0001, C.I=2.67, 6.34). Adolescents who had sexual intercourse in the past 12 months were almost three and half times more likely to ever use VCT compared to their counterparts (OR=3.41, P=0.0001, C.I=2.24, 5.18).

Adolescents ever discussed about VCT service were four times more likely to ever use the service compared to those who have not discussed (OR= 4.03, P=0.0001, C.I=2.41, 6.76). Adolescents those perceived that they were at risk of HIV were almost three times more likely to ever use the service compared to those have perceived (OR=2.86, P=0.0001, C.I=1.85, 4.42) and those perceived that they were at greatest risk of contracting HIV were six times more likely to ever use VCT service compared to their counterparts (OR=6.23, P=0.0001, C.I=3.31, 11.73).

Multivariable analysis

6.5.1 Factors Associated with family planning services utilization

A multivariate analysis involving all associated variables was performed to identify independent predictors of ever use of family planning services by adolescents. Consequently, religion and ever discussion about family planning services were independently showed significant association with ever use of family planning after controlling effect of other covariates at $p < 0.05$.

On the other hand religion and ever discussion about family planning have significant association with contraceptive use at first sexual intercourse but father educational status were not significantly associated after controlling effect of other covariates. But only ever discussion about family planning were independently associated with contraceptive use at their last sexual intercourse at $P < 0.05$.

The overall percentage of outcome variable explained by independent variables on the final model was 82.2% for ever use of family planning, 72.9% for contraceptive use at first sexual intercourse and 79.4% for contraceptive use at last sexual intercourse.

Orthodox Christian followers were three and half times more likely to ever use family planning compared to Muslims (AOR=3.45, C.I=1.23, 9.68, $P=0.02$) and adolescents those ever discussed about family planning were almost thirteen times more likely to ever use family planning compared to those have not discussed (AOR=12.98, C.I=4.63,36.40, $P=0.001$) after controlling effect of other covariates (Table 7).

Table 7: Factors associated with ever use of FP services among female adolescents in Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013

Variables	Ever used FP		Crude OR(95% C.I) P-value	Adjusted OR (95%. C.I)	P-value
	Yes(%)	No(%)			
Religion					
Muslim	16(38.1)	41(63.1)	1.00	1.00	
Orthodox Christian	20(47.6)	19(29.2)	2.70(1.15,6.33)	3.45(1.23,9.68)	.02*
Other Christians	6(14.3)	5(7.7)	3.08(.82,11.51)	4.08(.82,20.32)	.082
Parental Monitoring					
High	35(83.3)	37(56.9)	3.74(1.47,9.77)	6.5(.99,42.76)	.05
Low	7(16.7)	28(43.1)	1.00		
Ever discussed about family planning					
Yes	35(83.3)	20(30.8)	11.25(4.28,29.62)	12.98(4.63,36.40)	.000**
No	7(16.7)	45(69.2)	1.00	1.00	

Significant association=*P<0.05, ** P≤0.005, reference category=1.00

Orthodox Christian religion followers were more than four and half times more likely to ever use family planning compared to Muslims(AOR=4.71, C.I=1.71,12.95, P=0.003). Similarly adolescents who ever discussed about family planning were seven times more likely to ever use family planning compared to their counterparts(AOR=7.03, C.I=2.54,19.48, P=0.001)(Table 8).

Table 8: Factors associated with contraceptive use during first sexual intercourse, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013.

Variables	Contraceptive use at first sexual intercourse		Crude OR(95% C.I)	P-value	Adjusted OR(95% (C.I)	P-Value
	Yes(%)	No(%)				
Religion						
Muslim	11(32.4)	46(63.0)	1.00		1.00	
Orthodox Christian	19(55.9)	20(27.4)	3.98(1.60,9.86)	.003**	4.71(1.71,12.95)	.003**
Other Christians	4(11.8)	7(9.6)	2.39(.59,9.63)	.22	2.48(.54,11.34)	.242
Father education						
Not attended formal education	19(55.9)	57(78.1)	1.00			
attended formal education	15(44.1)	16(21.9)	2.81(1.17,6.75)	.02*	2.02(.47,5.61)	.34
Ever discussed about family planning						
Yes	27(79.4)	28(38.4)	6.20(2.83,16.12)	.000**	7.03(2.54,19.48)	.000**
No	7(20.6)	45(61.6)	1.00		1.00	

Adolescents who ever discussed about family planning were almost six times more likely use contraceptive compared to those not ever discussed(AOR=5.84, C.I=1.82,18.72, P=0.003)(Table 9).

Table 9: Association of contraceptive use at last sexual intercourse with independent variables, Anchar district, west Hararghe zone, Oromia region, East-Ethiopia, March, 2013

Variables	Contraceptive use at last sexual intercourse		Crude OR (95% C.I)	P- value	Adjusted OR (95% C.I)	P-value
	Yes(%)	No(%)				
Marital status						
Never married	14(63.6)	45(52.9)	1.56(.59,4.09)	.371	5.03(.71,35.70)	.11
Ever married	8(36.4)	40(47.1)	1.00		1.00	
Parental Monitoring						
High	17(77.3)	55(64.7)	1.86(.62,5.53)	.268	2.54(.44,14.66)	.297
Low	5(22.7)	30(35.3)	1.00		1.00	
Ever discussed about family planning						
Yes	18(81.8)	37(43.5)	5.84(1.82,18.72)	.003**	5.84(1.82,18.72)	.003**
No	4(18.2)	48(56.5)	1.00		1.00	

Significant association=*P<0.05, ** P≤0.005, reference category=1.00

6.5.2 Factors Associated with STI case management Service Utilization

The result of multivariable analysis showed that association between socio demographic variables; sex, age, marital status, religion, schooling status, educational status, mother educational status, father educational status, income, living arrangement and source of information in the house and STI case management service utilization could not be established due to a small count of outcome variables.

Similarly adolescent sexual activity and parental monitoring variables like having sexual partner, number of sexual partner in life time, sexual intercourse, sexual intercourse in the past twelve months, sexual frequency and parental monitoring are also difficult to show association with STI case management service utilization.

Additionally for awareness about the service, knowledge about place of the service and ever discussed about STI case management service it is difficult to establish association with STI case management service utilization in multivariable analysis due to a small count of outcome variable.

6.5.3 Factors Associated with VCT service utilization

From multiple logistic regression sex and magnitude of perception of risk for HIV were independently associated with ever use of VCT service after controlling effect of other covariates at $P < 0.05$. The overall percentage of ever used VCT service explained by predictor variables on the final model was 81.1%.

Males were five times more likely to ever use VCT service compared to females (AOR=5.25, $P=0.042$) and adolescents who were perceived themselves as high risk were almost eight times more likely to ever use VCT compared to those perceived themselves as low risk for HIV/AIDS (AOR=8.22, $P=0.005$) (Table 10).

Table 10: Factors associated with ever use of VCT service among adolescent in Anchar district, west Hararghe, Oromia, Ethiopia, March, 2013

Variables	Ever used VCT		Crude OR (95% C.I)	P-value	Adjusted OR (95% C.I)	P-value
	Yes(%)	NO(%)				
Sex						
Male	119(64.3)	102(47.0)	2.03(1.36,3.04)	.001**	5.25(1.065, 25.87)	.042*
Female	66(35.7)	115(53.0)	1.00		1.00	
Educational status						
unable to read and write	13(7.0)	22(10.1)	1.00		1.00	
can read and write	6(3.2)	3(1.4)	3.39(.72,15.89)	.122	.53(.022,12.90)	.695
Primary(1-8)	60(32.4)	107(49.3)	.95(.45,2.02)	.892	1.33(.034,52.39)	.880
secondary and above(≥ 9)	106(57.3)	85(39.2)	2.11(1.01, 4.44)	.049*	2.11(.51,8.74)	.301
Magnitude of perception of risk						
High	68(47.6)	15(12.7)	6.23(3.31,11.73)	.000**	8.22(1.07, 35.49)	.005**
Low	75(52.4)	103(87.3)	1.00		1.00	

Significant association=*P<0.05, ** P \leq 0.005, reference category=1.00

Qualitative finding

A. Key informant in-depth interviews

Six health workers (3 nurses and 3 health extension workers) of family health experts at woreda and health facilities (Health Centers and Health Posts) were interviewed. Additionally two teachers and two religious leaders from two religions with majority of followers in the area (one from Muslim religion and one from Orthodox Christian) were interviewed; almost all of respondents were served in the district for more than three years. The contents of the interview included Adolescents sexual activity, status of reproductive health utilization by adolescents and factors affecting provision of adolescent reproductive health services.

All of the experts mentioned family planning, VCT services, STI case management, safe abortion, ANC, delivery postnatal and PMTCT are being provided for adolescents at all public health facilities, among these PMTCT, VCT, STI case management and Safe abortion services are given in the health center while the rests are given both in the health center and health post. Almost all reproductive health services are being given free of charge except for STI treatment. Expert from health facilities explained adolescent sexual activity and reproductive health services as follows: *“Currently there is increase in the adolescent need of abortion in our health center; most of them are due to unintended pregnancy... This may be an indication for increased sexual activity among adolescents.... There was VCT campaign in the last year and outreach program every quarter, but utilization of service was not as expected.”* (Nurse, 27 years old)

Similarly high school teacher said that: *“attrition rate of female students from the school is increasing currently... unintended pregnancy play major role for their attrition.... The reason for pregnancy and other reproductive health problems may be lack of school based adolescent reproductive health services including club.”*(Male high school teacher, 29 years old)

The religious leaders explained that there is a support for utilization reproductive health by religion to improve reproductive health of adolescent in formal union. The Orthodox Christian religious leader said that: *“In order to improve adolescent reproductive health services there should be continuous health education in every spiritual areas and other gathering concerning*

adolescent health and disease such as HIV and other STDs especially for adolescents who engaged in premarital sexual intercourse.” (Male, 41 years old).

Similarly the Muslim religious leader said: *“Regarding to family planning there is a condition that religion support the use of family planning service for those who are in formal union; for example when pregnancy harm the mother’s health or life, she may use family planning. The other condition is any child has a right given by Allah to breastfed by his/her mother until two years. So these two conditions support women to use family planning.” (Male, 27 years old)*

The key informants explained many factors for under utilization of reproductive health services by adolescents; these are fear of social value and being embarrassed, misconception of adolescents about pregnancy, unsafe sex, shortage of supply, harmful traditional practices and lack of school based adolescent reproductive health club and services were among reason explained by both health workers and school teachers .

The expert from health center said: *“...when we ask adolescents who come for abortion some of them explain that they have conducted only one sexual intercourse and I have perceived that I can’t become pregnant in a single intercourse... others said I have conducted sexual intercourse without condom because my partner refuses to use it..., others explained that have engaged in the sexual activity unintentionally...and there is also fear of embarrassment...” (Nurse, 31 years old)*

All experts also raised shortage of some contraceptives such as Depo-Provera in the last year. The summary of information is: *“Last year there is inconsistency supply of family planning drugs... especially Depo-Provera was not available for more than three months consequently...and sometimes the syringe will not available with drug...”*

Out of the above reasons health extension workers raised the issue of appointment for underutilization of VCT service. The summary of their information is presented as follows: *“...Most of the time after we appointed the people for VCT services the health workers will absent from the appointment...The people refused when we appointed for the next campaign...”*

Lack of school based reproductive health education and club was reason mentioned by teachers. The 27 years old high school teacher said that: *“there was no adolescent reproductive health clubs in the school, but most of our students are in the fire age; unless reproductive health education is given for them they may engage in unsafe sexual intercourse”*

All health extension workers participated in in-depth interview raised the issue of early marriage as one factor for not utilizing reproductive health. Among them one 24 years old health extension worker said that: *“presence of deep-rooted harmful traditional practices like ‘Chebsa and Telefa’ type of marriage also hinders the use of reproductive health for two reasons: primarily the marriage was not based on the willingness of adolescent so that no one give chance for blood test, secondly the marriage by itself is immediate/emergency and there was no time for screening.”*

Finally the respondents recommended that; there should be continuous supply of reproductive health kits including VCT test kits and wide range of contraceptives in all health facilities to fulfill the need of adolescents. Additionally there should be close cooperation between health office and schools as well as religious institution to improve adolescents’ reproductive health services and minimize barriers related to their utilization through establishment of reproductive health club in the school and out of school, and provision of health education in their respective religious institution. Furthermore, extensive awareness creation on risks of pregnancy, risks of STIs including HIV and other reproductive health problems, and importance of adolescent reproductive health, has to be conducted involving all family members, religious leaders, community leaders and community based associations. They have also recommended that there should be political commitment and strong legal support from all concerned bodies to combat harmful traditional practices in the district.

B. Focus group discussion

Thirty two participants were involved in four groups of adolescents, two groups in the school and two groups out of the school with sex matched. Five research questions were posed to insight in depth understanding of adolescents’ sexual activity and needs of adolescent reproductive health services with special emphasis on family planning, STI treatment and VCT services utilization.

The questions include activities in which adolescent engaged in their free time (including sexual activity), utilization health reproductive health services, perception and management of risk, and information about reproductive health and communication about problems related to sexual and reproductive health.

The groups started discussion with general major adolescents' activity during break time, most frequent activity they encounter, and followed by sexual activity, conditions that facilitate sexual activity, and type of their sexual partner. Adolescent explained while some adolescent devote their free time for their study and helping their families, majority of adolescents in the area involved in chewing Khat. They explained that Khat chewing is common in the area, and this is the suitable area for gathering of adolescents since they chew together. All FGD agreed that Khat chewing as one suitable area for adolescent sexual activity as they chew together with both sex mixed. School FGD explained rent house as suitable place for sexual activity and students, government workers and jobless adolescents in the kebeles as sexual partners. The summary of discussion was as follows: *“Most adolescents are currently engaged in chewing Khat... They gather together at one of student's homes, with both sexes mixed, sometimes equal number of sex.... Most of the sexual partners for male adolescents are female students; while for female adolescents they vary from student to government employee...”*

Regarding to utilization of health services they responded that some adolescents are utilizing services like family planning and VCT services. Most adolescents prefer to use condom while others prefer to go to health providers home rather than going to the health facility for family planning. Regarding VCT, most adolescents screened during the campaign but not purposely go health facility for screening. Here is the summary of information: *“...Some adolescents use condom during sexual intercourse, others especially females go to health providers' home for family planning because they fear that the community may see them and stigmatize them when they go to the health facility...Adolescents those are sexually active fear go to health center for blood test...”*

The summary of female FGD was also as follows: *“...even though certain adolescents are currently using family planning services, some adolescents lost their school because of unintended pregnancy...so this shows that they are not utilizing properly this service.”*

Adolescent also discussed about perception and management of risks; they have explained that most adolescent know how HIV is transmitted but the problem is bringing behavioral change not about knowledge. But from female discussants there is an idea that indicates some females perception of pregnancy cannot occur in the single sexual intercourse.

The summary of their idea is here: *“for those adolescents who have not used reproductive health services the reason is relationship as boyfriend/girlfriend without understanding reproductive health problems...adolescents forced by their partners to have sexual intercourse without condom....”*

Additionally female discussants added that: *“...some adolescents perceived that they can't become pregnant in the single sexual intercourse....while others know they are at risk of reproductive health problems they fear their partners and even forced by their partners not to use.”*

But Females FGD out of school explained harmful traditional practice like **‘Chebsa and Telefa’** as major reason for not utilization of the services. The summary of discussion was as follows: *“...adolescents marry to the person who she do not know, and most of them marry by **‘Chebsa’** while others by **‘Telefa’**... no one allow them to have time for blood test... marriage is not based on the willingness of adolescent.”*

Concerning about information about reproductive health both discussants in the school and out of school said that there is no local information dissemination in the areas. The only source for reproductive health is information and advertisement given from the radio. Additionally they have added that this information cannot bring behavioral change, so there should be local source. Generally they have given the following suggestion: *“...adolescents prefer programs that entertain them such as drama and poem, local information like health education in the kebeles and school reproductive health clubs must be available for because these programs entertain the adolescents and bring behavioral change... So there should be local adolescent reproductive health program such as youth and adolescents reproductive health club both in the school and out of school”*

Finally discussants end up with communication about problems related to sexual and reproductive health. Both females and males FGD responded similar idea, that is when the adolescent encounter any reproductive risk they primarily consult their friends. The reason why they do not tell to their family is from the beginning their relationship with their partner is hidden, so they fear to talk to their families. For females however; if they have not get solution from their friends they will report to their families especially when the problem is pregnancy.

7. Discussion

This community based cross-sectional study tried to assess range of factors associated with utilization of adolescents reproductive health services including socio-demographic, adolescents sexual activity and parental monitoring; and adolescents awareness about the services specifically for family planning, STI case management and VCT services in the rural kebeles of Anchar district, West Hararghe zone, Oromia region by using both qualitative and quantitative data collection techniques. In addition, the study tried to investigate reasons for not utilizing of each service. So far most studies on this subject have been limited to the urban areas of the country with little information on the rural areas like Anchar district.

Ever use of family planning was measured by asking adolescent use of at least one type of family planning method in their life time. In this study, it was learnt that two hundred thirty six (58.7%) adolescents were sexually experienced in their life time, out of them one hundred seven (45.3%) were females. Among sexually active female adolescents forty two (39.3%) have ever used family planning. This result was higher than study conducted in East Gojjam (21%) and Jimma (17.6%)(48,50). The reason might be the time difference between two studies; currently health extension workers are serving the rural community but the previous studies were conducted before implementation of health extension program. The second reason especially for East Gojjam is the percentage of married adolescents (44%) which affect the utilization as contraceptive use among married women in East Gojjam is only 12% compared to unmarried which is 57%; additionally the potential health coverage of Anchar district may facilitate for adolescents to access and utilize the service. The study conducted in Kenya showed almost similar finding which is 46.7% of females has ever used family planning (41). But this study is less than the study conducted in Brazil and Addis Ababa which showed that among sexually active female student adolescents living in Brazil 62.1% of them are using some kind of contraceptives, similarly among sexually active adolescents in Addis Ababa 67% males and 51% females have ever used condom(36,47). The reason for the difference may be the previous studies were conducted in the urban slums while the current study was focused on the rural adolescents. Additionally Brazil has promoted public campaigns to inform youngsters about the use of contraceptives but this was not conducted in our country especially for rural adolescents.

Among female respondents who were sexually experienced 31.8% of them have used contraceptive at their first sexual intercourse. This study was comparable with the study conducted on Vietnamese college students which showed 32% males and 28% females and in Dakar which is less than 33% were used contraceptive in their first sexual intercourse (32,33).

Adolescents use of contraceptive at their last sexual intercourse were elicited by asking adolescents whether they have used any kind of contraceptives in their last sexual intercourse which is equivalent to current utilization of family planning; as a result only 20.6% of adolescents used contraceptive in their last sexual intercourse. This result is less than both ever use of family planning and contraceptive use at the first sexual intercourse. This finding is higher than EDHS 2011 which indicated that current utilization of family planning among adolescents were only 5% (16). This may be EDHS include both developing and developed regions. But this result was less than study conducted in Lagos, Latin America, Bangladesh, Indonesia, and Kazakhstan which found that non-use of contraceptives among adolescents in Lagos were found to be 59.1% while the result of rest countries showed that between 40-60% of adolescents are currently using contraceptives (35,42). This might be the previous studies were conducted in urban area for Lagos, Nigeria as the fact that availability of separate adolescent clinic which is not available in rural Ethiopia, but for the rest of countries the study was country wide involving both urban and rural adolescents.

Globally more than 10% of all births or an estimated of 14 million adolescent girls between the ages of 15 and 19 years gave birth every year and within this age category over four million women have abortions, 40% of which are performed under unsafe conditions (7,8,10). So the use of family planning plays the key role in preventing unintended pregnancies; and consequently minimizes unsafe abortion. Many young girls of Ethiopia engage in sex at a relatively early age, and they are unlikely to use contraception: they are therefore vulnerable to unintended pregnancies which is more than one in three births to women aged 15-19 years are unintended at the time of birth (14); 45 percent of the total births in the country occur among adolescent girls and young women with the number of births among women aged 15-19 years is 99 per 1,000 women (15, 16). In the present study among sexually active female adolescents only 39.3% have ever used family planning and contraceptive use in their last sexual intercourse is even much less

which was only 20.6%. Consequently this will increase likelihood of being prone to unintended pregnancy and unsafe abortion.

Different studies done elsewhere in the world and Ethiopia showed that sexual frequency, schooling status, Household economic status, receipt of parental sexual and reproductive education, educational status, age of adolescent, marital status, educational status, radio listeners, awareness about family planning, knowledge about place of family planning services, having young mother, parental monitoring and having at least one sexual partner were all associated with utilization of family planning (32,33,35, 38,40, 41, 42,46,47,48,49). But in this study only religion and ever discussion about family planning were associated with family planning service utilization. In contrary educational status, schooling status, marital status, source of information, awareness about family planning, awareness about place of family planning services, mother age, parental monitoring, having sexual partner and family income were all not significantly associated with utilization of family planning.

Adolescent discussion about family planning was strongly associated with family planning utilization. In the present study those ever discussed about family planning were almost thirteen times more likely to ever use family planning than their counterparts. This was also supported by study conducted in US(56). The reason is due to the fact that those discussed about the services might insight deeper understanding of benefits of the service which may encourage them to use the service compared to their counterparts.

The current study revealed that there was a disparity in utilizing of family planning among orthodox Christian followers and Muslims. In generally Orthodox Christian religion followers were almost three and half times more likely to use family planning compared to Muslims. This association was not mentioned in the previous studies which might be unique for this study. This evidence is also supported by evidence from qualitative finding obtained from key informant's in-depth interview which showed Muslim followers in rural setting refuses to use contraceptive.

In this study socio-demographic factor such as marital status, schooling status and educational level did not showed significant association with family planning service utilization. This is not consistence with study conducted in Uganda and Kenya (41,59). This might be due to the fact

that most adolescents in this area were in the school and unmarried as compared to Kenya which is 40.1%.

From the total adolescents fifteen of them have experienced with at least one of the STI symptoms, out of them ten have seek STI treatment services while the rest have not attended any STI treatment services. This finding is higher than study conducted in USA(49.7%), Arusha, Tanzania(0.2% males and 0.9% females), Balkan(42%), and Jimma(5%) and (37,43,48,51,). The reason for the disparities may be as the previous study conducted on urban slums adolescents might have been treated as clandestine and may deny as if they do not know such RH problems (48). But it is consistent with study conducted in Addis Ababa (63.9%) and rural Butajira (50%) (47,52), and lower than study conducted in Burkina Faso (0.7% females and 0.1males), % Ghana (7.9% females and 2.8 % males), Malawi (3.5% females and 5 % males) and Uganda (8.6% females and 1.8 % males) were not seeking any care for STI (40). The difference might be the small count of the number for experience of STI symptoms which may exaggerate the percentage.

The reason responded by participants for not seeking the service was feeling of afraid or embarrassed to get the service. This is consistent with studies in Nigeria, Burkina Faso, Ghana, Malawi and Uganda which showed that majority of adolescents who contracted STI or other reproductive health problems did not use reproductive health services due to shame and embarrassment, some feared being ridiculed and discrimination they face by some health service staff in accessing STI services (13,40).

Different studies conducted in elsewhere in the world showed that sex, House Hold income, number of sexual partner, personal and mother educational level, schooling status, and awareness about STI services were all associated with services utilization (37,40,48). However in present study it is difficult to determine independent association of above variables with STI case management service utilization due to small count of observation in the outcome variable.

Adolescents use of VCT service were 45.6%, and the result of the current study was higher than study conducted in North and south Nigeria(1.7% and 3.7%), Butajira(6%), Balkans high school(5.9%), Eastern Cape of South Africa(10.9%), Burkinafaso(1.5% for male and 2.5% for female), Ghana(1.2% for males and 2.8% for females), Malawi(4.85% for males and 3.5% for

females), Uganda(2.2% for males and 10.7% for females) and Lagos(1%)(40, 42, 53, 54, 55). The reason might be the presence of VCT campaign in the last year and quarterly outreach program which may increase number of service users as explained by experts during in-depth interview with service providers. However the utilization of service by adolescents was remained still less than half, which needs more attention to improve the utilization coverage.

Studies in the different countries outside and inside Ethiopia showed that sex, number of sexual partner, adolescent educational status, perception of risk, mother educational status, discussion about VCT services, peers and sexual experience were significantly associated with ever use of VCT services(37, 48, 53,54, 55, 60). But in the present study only sex and magnitude of perception of risk were associated with ever use of VCT service.

Study conducted in Ndola, Zambia showed that adolescents discussion about VCT services with their family were positively associated with ever use of the service (60). However this is not significant in the current study. This might be due to the fact that this study was conducted in rural setting parents might not discuss about sexual and reproductive health with their adolescents since it is considered as taboo.

Current study showed that the frequently explained reasons for those who have not utilized the service were fear/embarrassment to get the services and lack of confidentiality. This is similar with study conducted in Nigeria which showed that among the major reason for not utilizing reproductive health by Nigerian adolescents were fear or being embarrassed and lack of confidentiality by health workers (13). Beside these harmful traditional practices like ‘**Chebsa and Telefa**’ and absence of reproductive health education in the school were frequent reasons addressed through FGD.

Sex of adolescent is an important predictor for the utilization of VCT service in this study. In general, males were more likely to use VCT service as compared to females. This result is consistent with previous study done in North and South Nigeria (54).

Adolescent perception about risk of HIV has positive association with VCT service utilization. This means adolescents who perceived themselves at high risk for HIV were more likely to utilize VCT service compared to their counterparts. This result was consistent with study

conducted in North and South Nigeria (54). This might be adolescent who perceived that they are at the risk of HIV check their status regarding to exposure of the HIV so that it probably increased utilization of the service when compared to those perceived as low risk.

Radio play a great role as source of information dissemination on VCT services followed by health workers; however teachers play the negligent role in information dissemination regarding to VCT services, even though school based adolescent health service is very important for improvement of adolescent reproductive health. Lack of reproductive health club is also reason explained by teachers through qualitative response, so that the role and involvement of teachers in school based health education is less. Relationship as boy friend/girl friend without using VCT service was reason explained by school FGD but 'Chebsa' and 'Telefa' was reason explained by out of school FGD for not utilizing the service.

Strength and Limitation of study

Strength of the study

Selection bias was minimized since it was community- based study with probability sampling technique.

Mixed method was used to complement the findings.

Limitation of the study

This study did not assess other reproductive health services though they are important.

The income of family was estimated based on the average monthly expenditure, so it is liable for bias.

Even though sex and age matched interviewers used in data collection social desirability bias is likely due to social and cultural influence

Assessment of STI case management service utilization is based on syndromic approach it might be liable to bias.

8. Conclusion and Recommendation

8.1 Conclusion

In conclusion utilization of reproductive health services regarding to family planning and VCT by adolescents is inadequate in general, as clearly depicted that more than half adolescents who were sexually active were not utilizing the services.

The main reasons given by the individual adolescents for not using family planning were lack of awareness about how to use family planning, religion opposition, and lack of privacy by health workers. For VCT service the main reasons illustrated by adolescents were fear of afraid/embarrassed, lack of confidentiality, inconvenient service hour and long waiting time, but for STI case management the only reason was fear of afraid/embarrassed.

Beside these absence of reproductive health education for adolescents, HTP like **chebsa and telefa**, misconception about pregnancy, unsafe sex, being afraid or embarrassed and shortage of supply were reasons given by health workers, religious leaders, teachers and adolescents through in-depth interview and FGD.

Religion and discussion about family planning were found to be factors associated with family planning service utilization while adolescents' perception of risk was found to be positive predictors for VCT service utilization. VCT services utilization differ by sex which showed that males were generally more likely to VCT services than females.

8.2 Recommendation

Based on the above finding of the study the following recommendations were made: -

District Health Office and Health Facilities

The district health office should:

- Promote adolescent reproductive health especially concerning family planning, STI case management and VCT services
- Provide consistent supply for reproductive health services kit
- Strengthen outreach services to reach all segments of adolescents

- Provide information, Education and Communication for adolescents

The Health Facilities should:

- Provide the services per need of adolescents
- Give technical support for school based adolescent reproductive health education
- Give continuous reproductive health awareness and harmful traditional practices like *chebsa and telefa*.

District Administration and District Women and Child Affairs office

District Administration and District Women and Child Affairs office should:

- Promote community Involvement in reproductive health program
- Give continued awareness on harmful traditional practices
- Women empowerment especially adolescent girls to increase females utilization for services

District educational office and District Youth and sport office

District educational office, and district youth and sport office should:

- Establish and support school based adolescent reproductive health club
- Continual support and IEC/BCC for adolescents
- Establish youth center and adolescent reproductive health clubs

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Annexes

Annex I. Information Sheet and Consent Form

Title of the Research Project

Reproductive health service utilization and associated factors among adolescents in Anchar district, East Ethiopia.

Name of Principal Investigator: Mustafa Geleto

Name of the Organization: Jimma University, College of public Health and Medical Sciences

Name of the Sponsor: Jimma University

Information sheet and consent form prepared for adolescents who are going to participate in Research Project.

Introduction

This information sheet and consent form is prepared with the aim of determining the magnitude of reproductive health service utilization (FP, STI diagnosis and treatment and VCT services) and factors affecting the specific service utilization. The research group includes the principal investigator, ten trained data collectors, two Supervisors, and two advisors from Jimma University.

Purpose of the Research Project

The aim this study is to determine the magnitude of reproductive health service utilization (FP, STI diagnosis and treatment and VCT services) and factors affecting the specific service utilization. Assessing factors affecting reproductive health service utilization have a big contribution for reduction of TFR, MMR and IMR in the country and thus contribute in achieving the national millennium development goal specially MDG4 and MDG5. The results of this study will be used to design appropriate intervention programs to address the low utilization of reproductive health services of the adolescents in Anchar district.

Procedure

To assess the reproductive health service utilization and associated factors among adolescents in Anchar district, you are selected to be one of the study participants if you are willing to take part in this study and we kindly invite you to take part in our project. If you are willing to participate, we are so happy and we need you to clearly understand the aim of this study and sign the agreement form. Finally you are kindly requested to provide and fill your genuine response in the questioner.

Benefits, Risk and /or Discomfort

By participating in this research project you may feel some discomfort in wasting your time (a maximum of 30 minutes). However, your participation is definitely important to identify factors affecting reproductive health service utilization and to design appropriate strategy to increase the utilization of the selected reproductive health services. There is no risk or direct benefit in participating in this research project.

Incentives/Payments for Participating

You will not be provided any incentives or payment to take part in this project.

Confidentiality

The information collected from you will be kept confidential and stored in a file, without your name by assigning a code number to it. And hence no report of the study ever identifies you.

Right to Refusal or Withdraw

You have the full right to refuse from participating in this research. You have also the full right to withdraw from this study at any time you wish.

Person to contact

This research project will be reviewed and approved by the ethical committee of the Jimma University. If you have any question you can contact any of the following individuals and you may ask at any time you want.

Name: Mustafa Geleto

Tele: +251912291736

E-mail: geletom@yahoo.com

Annex II: English questionnaire

Jimma University

College of Public Health and Medical sciences

A questionnaire prepared to assess the reproductive health service utilization and associated factors among adolescents of Anchar District

Introduction

Dear participants, the main aim of this study is to assess the reproductive health service utilization and associated factors among adolescents in Anchar District. The results of the study will be used to design appropriate intervention strategies to increase adolescent's reproductive health service utilization. The questionnaire contains closed ended questions and will be provided in the form of self administered questioner. So you are kindly requested to provide and fill your genuine answers to the questions. If you have any question, don't hesitate to ask the data collector.

Thank you for your cooperation!!

Are you willing to participate in this study?

Yes No , (stop filling the questioner)

Name of data collector _____ Signature_____

Name of supervisor _____ Signature_____

Part I: Socio-demographic characteristics

No.	Questions	Response	Skip to Qn No ---
101	Sex	1. Male <input type="checkbox"/> 2. Female <input type="checkbox"/>	
102	Age in years	_____years	
103	Marital status	1. Single <input type="checkbox"/> 2. Ever married <input type="checkbox"/>	
104	Religion	1. Orthodox <input type="checkbox"/> 2. Muslim <input type="checkbox"/>	

		3. Catholic. <input type="checkbox"/> 4. Protestant <input type="checkbox"/> 5. Others (specify)_____	
105	Schooling status	1. In school <input type="checkbox"/> 2. Out of school <input type="checkbox"/>	
106	Educational status	1. Unable to read and write <input type="checkbox"/> 2. Can read and write <input type="checkbox"/> 3. 1-8 <input type="checkbox"/> 4. 9 and above <input type="checkbox"/>	
107	Age of mother in years	_____years	
108	Age of father in years	_____years	
109	Mother's educational status	1. Unable to read and write <input type="checkbox"/> 2. Read and Write only <input type="checkbox"/> 3. Primary education (1-8) <input type="checkbox"/> 4. Secondary education & above (≥ 9) <input type="checkbox"/>	
110	Father's educational status	1. Unable to read and write <input type="checkbox"/> 2. Read and Write only <input type="checkbox"/> 3. Primary education (1-8) <input type="checkbox"/> 4. Secondary education & above (≥ 9) <input type="checkbox"/>	
111	average monthly household expenditure in Birr	_____ Birr	
112	With whom do you live now?	1. I live alone <input type="checkbox"/> 2. With both parents <input type="checkbox"/>	

		3. Only with my father <input type="checkbox"/>	
		4. Only with my mother <input type="checkbox"/>	
		5. With relatives <input type="checkbox"/>	
		6. Others, specify _____	
113	Source of information in your house	1. Functional radio <input type="checkbox"/>	
		2. Functional television <input type="checkbox"/>	
		3. Functional telephone <input type="checkbox"/>	
		4. News paper <input type="checkbox"/>	
		5. Others, specify _____	

Part II: Sexual history and parental monitoring

No.	Questions	Response	Skip to Qn No ---
201	Have you ever had sexual partner?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If No skip to Qn 203
202	Number of sexual partner in your life time	1. One <input type="checkbox"/> 2. Two or more <input type="checkbox"/>	
203	Have you ever had sexual intercourse?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	
204	Have you had sexual intercourse in the past 12 months?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	
205	Number of sexual intercourse you ever had	1. Once <input type="checkbox"/> 2. More than once with the same partner <input type="checkbox"/> 3. More than once with different partner <input type="checkbox"/>	

206	Does your family ask you where did you spend your leisure time/after school?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 207
207	How often do they ask you?	1. Always <input type="checkbox"/> 2. Sometimes <input type="checkbox"/> 3. Rarely <input type="checkbox"/>	
208	Does your family ask you how you spent your time?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	
209	Does your family ask you about your friends?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	
210	Did you seek approval of your parents to have a late night outing with classmates/friends?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	

Part II: Family planning service utilization and associated factor

No.	Questions	Response	Skip to Qn No ---
301	have you ever heard about FP service	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 302
302	Source of information (more than one answer can be selected)	1. Radio <input type="checkbox"/> 2. TV <input type="checkbox"/> 3. News paper/magazines <input type="checkbox"/> 4. Family/relatives <input type="checkbox"/> 5. Peer group/friends <input type="checkbox"/> 6. Teachers <input type="checkbox"/> 7. Pamphlet/poster <input type="checkbox"/> 8. Health workers <input type="checkbox"/>	

		9. Others, specify _____	
303	Do you know where family planning services provided?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 304
304	Where do FP service provided? (more than one answer can be selected)	1. Health Center <input type="checkbox"/> 2. Health post <input type="checkbox"/> 3. Private clinic <input type="checkbox"/> 4. Others, specify _____	
305	Have you ever discussed about FP service?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 306
306	With who did you ever discussed? (more than one answer can be selected)	1. Parents <input type="checkbox"/> 2. Peer groups/friends <input type="checkbox"/> 3. Sexual partner <input type="checkbox"/> 4. Teachers <input type="checkbox"/> 5. Others, specify _____	
307	Have you/your partner ever used family planning services (if you are sexually active)?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If No skip to Qn 311
308	Have you / your partner used contraceptive method the first time you had sex?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	
309	Have you/ your partner used contraceptive method the last time you had sex?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	
310	Where did you get the FP services? (more than one answer can be selected)	1. Health Center <input type="checkbox"/> 2. Health Post <input type="checkbox"/> 3. Private clinic <input type="checkbox"/> 4. Pharmacy <input type="checkbox"/> 5. Others, specify _____	

311	<p>What was the reason for not using FP services? (more than one answer can be selected)</p>	<p>1. Too young to start contraception <input type="checkbox"/></p> <p>2. Feel afraid/embarrassed to get the service <input type="checkbox"/></p> <p>3. Lack of knowledge how to use the contraception method <input type="checkbox"/></p> <p>4. Religious opposition <input type="checkbox"/></p> <p>5. Opposition from Sexual partner <input type="checkbox"/></p> <p>6. Fear of side effects <input type="checkbox"/></p> <p>7. Cost of the service <input type="checkbox"/></p> <p>8. Lack of preferred method <input type="checkbox"/></p> <p>9. Inconvenient service hour <input type="checkbox"/></p> <p>10. Long waiting time to get the service <input type="checkbox"/></p> <p>11. Lack of privacy by health workers <input type="checkbox"/></p> <p>12. Judgemental attitude of the health workers <input type="checkbox"/></p> <p>13. Others, specify _____</p>	
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Part IV: Utilization of STI diagnosis and treatment service and associated factor

No.	Questions	Response	Skip to Qn No ---
401	<p>have you ever heard about STI diagnosis and treatment service</p>	<p>1. Yes <input type="checkbox"/></p> <p>2. No <input type="checkbox"/></p>	<p>If yes skip to Qn 402</p>
402	<p>Source of information (more than one answer can be selected)</p>	<p>1. Radio <input type="checkbox"/></p> <p>2. TV <input type="checkbox"/></p> <p>3. News paper/magazines <input type="checkbox"/></p> <p>4. Family/relatives <input type="checkbox"/></p> <p>5. Peer group/friends <input type="checkbox"/></p> <p>6. Teachers <input type="checkbox"/></p> <p>7. Pamphlet/poster <input type="checkbox"/></p> <p>8. Health workers <input type="checkbox"/></p>	

		9. Others, specify _____	
403	Do you know where STI diagnosis and treatment service provided?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 404
404	Where do STI diagnosis and treatment service provided? (more than one answer can be selected)	1. Health center <input type="checkbox"/> 2. Private clinic <input type="checkbox"/> 3. Others, specify _____	
405	Have you ever discussed about STI diagnosis and treatment service?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 406
406	With whom did you ever discuss? (more than one answer can be selected)	1. Parents <input type="checkbox"/> 2. Peer groups/friends <input type="checkbox"/> 3. Sexual partner <input type="checkbox"/> 4. Teachers <input type="checkbox"/> 5. Others, specify _____	
407	Have you ever experience the following symptoms? (more than one answer can be selected)	1. Burning sensation during urination <input type="checkbox"/> 2. Bad smelling genital discharge <input type="checkbox"/> 3. Genital ulcer/sore <input type="checkbox"/> 4. Itching around the genitalia <input type="checkbox"/> 5. Swelling in groin/ genital area <input type="checkbox"/> 6. Did not experience any of the above symptoms <input type="checkbox"/>	
408	If you experience one or more of the above symptoms, did you seek any kind of STI diagnosis and treatment service?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If No skip to Qn 410
409	Where did you get the service? (more than one	1. Health center <input type="checkbox"/> 2. Private clinic <input type="checkbox"/>	

	answer can be selected)	3. Pharmacy <input type="checkbox"/> 4. Health posts <input type="checkbox"/> 5. Traditional healers <input type="checkbox"/> 6. Others, specify _____	
410	What was the reason for not seeking the service? (more than one answer can be selected)	1. Feel afraid/embarrassed to get the service <input type="checkbox"/> 2. Cost of the service <input type="checkbox"/> 3. Inconvenient service hour <input type="checkbox"/> 4. Long waiting time to get the service <input type="checkbox"/> 5. Lack of privacy by health workers <input type="checkbox"/> 6. Judgemental attitude of the health workers <input type="checkbox"/> 7. Others, specify _____	

Part V: Utilization of VCT service and associated factor

No.	Questions	Response	Skip to Qn No ---
501	have you ever heard about VCT service	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 502
502	Source of information (more than one answer can be selected)	1. Radio <input type="checkbox"/> 2. TV <input type="checkbox"/> 3. News paper/magazines <input type="checkbox"/> 4. Family/relatives <input type="checkbox"/> 5. Peer group/friends <input type="checkbox"/> 6. Teachers <input type="checkbox"/> 7. Pamphlet/poster <input type="checkbox"/> 8. Health workers <input type="checkbox"/> 9. Others, specify _____	
503	Do you know where VCT service provided?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 504
504	Where do VCT service provided? (more than one answer can be selected)	1. Health center <input type="checkbox"/> 2. Private clinic <input type="checkbox"/> 3. Others, specify _____	

505	Have you ever discussed about VCT service?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 506
506	With whom did you ever discuss? (more than one answer can be selected)	1. Parents <input type="checkbox"/> 2. Peer groups/friends <input type="checkbox"/> 3. Sexual partner <input type="checkbox"/> 4. Teachers <input type="checkbox"/> 5. Others, specify _____	
607	Do you think you are at risk of HIV/AIDS?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If yes skip to Qn 508
508	How much do you think is your risk of contracting HIV/AIDS?	1. High risk 2. Low risk	
509	Have you ever used VCT service?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>	If no skip to Qn 511
510	Where did you get the service? (more than one answer can be selected)	1. Health center <input type="checkbox"/> 2. Private clinic <input type="checkbox"/> 3. Others, specify _____	
511	What was the reason for not seeking the service? (more than one answer can be selected)	1. Feel afraid/embarrassed to get the service <input type="checkbox"/> 2. Cost of the service <input type="checkbox"/> 3. Inconvenient service hour <input type="checkbox"/> 4. Long waiting time to get the service <input type="checkbox"/> 5. Lack of confidentiality by health workers <input type="checkbox"/> 6. Judgemental attitude of the health workers <input type="checkbox"/> 7. Others, specify _____	

Annex III: Focus Group Discussion Guide

A. Introduction (by the moderator)

“You are all welcome to the venue of this discussion. We are happy that you are able to spare some time to come have this discussion. Let’s begin by introducing ourselves.” The moderator should introduce himself/herself first and then each member of the research team should do the same. The moderator should ask each focus group discussion (FGD) participant to introduce themselves, using a nick name, and emphasize that this is the only name that should be used for the purpose of the discussion, and that participants should not use anyone’s actual or real name in the discussion group. Participants should not refer to individuals outside of the discussion group the point of the discussion is to talk about how adolescent people think and behave in general.

The moderator should ask participants to mention their favorite hobbies as an icebreaker (5–8 minutes).

B. Purpose of the discussion (by the moderator)

All the issues that we will be discussing are of importance for adolescents of your age. Some of the issues that we will be discussing are sexual activities, reproductive health information and services, perception and management of risks of HIV and STIs. We are interested in all your ideas, comments and suggestions. This research is mainly to have more information that will enable improvement in the quality of health of young people. All information will be treated as confidential (3 minutes).

C. Explain the ground rules for discussion (by the moderator)

We would like you to have a friendly discussion amongst yourselves about these issues. There is no right or wrong answer. Everyone should feel free to air his/her views and opinions. We would like to have one speaker at a time and there should be no side discussions during the session. Anyone can contribute to the discussion at any time. You all should feel free to agree or disagree in a friendly manner. We are asking for your permission to tape the discussion. We will spend

between two to three hours in total and some refreshments will be served midway through the discussion. (3 minutes).

1. Activities engaged in (including sexual activity)

Adolescents of your age usually engage in many activities.

We would like you to tell us the kinds of activities that adolescents in this community do during their free time.

Probe: (if not mentioned) ask about sexual activities, types of sexual activities and relationships and terms used to describe them, types of sexual partners, location and events surrounding sexual activities, and consequences of sexual activities. (About 20–25 minutes on this section)

2. Health services

We would like to know from you whether adolescents of your age seek reproductive health services. Do adolescents of your age seek health services concerning VCT, STIs or contraceptives?

Probe: what types of services available/not available to adolescents, what types of providers are accessible and affordable, where do adolescents prefer to go for such services, what do they or their friends like and dislike about the services, what services do they or their friends prefer, whether they or their friends know about VCT (voluntary counseling and testing for HIV), access to VCT services, and advantages and disadvantages of VCT

Probe: for sources that are outside of the formal medical care system (traditional healing, faith-based treatment and other forms of alternative medicine). (About 20–25 minutes on this section)

3. Perceptions and management of risks

Some adolescents think that they can't get pregnant, contract HIV and STIs, while others think they can. Do adolescents like you think these can happen to them?

We would like you to tell us what adolescents of your age consider risky behaviors.

Probe: risky sexual behaviors, what kinds of situations and factors increase adolescents' risk of HIV and STIs, what do adolescents like you see as ways of protecting yourselves from HIV and STIs, and of prevention (probe about abstinence, fewer sexual partners and condom use); risk of unplanned pregnancy, perceptions about young unmarried pregnant girls, perceptions about unmarried adolescent fathers. (About 20–25 minutes for this section)

4. Information about reproductive health

We would like to know about the types of sexual and reproductive health information that are available to adolescents of your age in your community. From where do they get this information?

Probe: formal and informal sources, who do adolescents talk to about this topic (probe about parents and other adult relatives, peers, sexual partners, media, teachers, health providers); how often do they discuss these issues; preferred sources, problems with access to information, the types of information that they would like/not like, preferred medium of delivery; are some sources better/more accurate than others? (About 15–20 minutes on this section)

5. Communication about problems related to sexual and reproductive health

When adolescents of your age have questions/problems about relationships with girls/boys whom do they discuss with?

Probe: people that they discuss sexual and reproductive health issues with, people that they prefer to discuss sexual and reproductive health issues with (parents, teachers, health workers, peers, partners, religious leaders, etc), what makes adolescents talk to or not talk with parents, peers, teachers and counselors, adolescents' ability to negotiate safe sex (About 20–25 minutes on this section)

Thank you for taking the time to discuss with us issues affecting adolescents.

Annex IV: Interview Guide

1. Services Providers In-depth Interview Guide

Interview site _____ date _____

Direction: my name is _____. The main aim of this interview is to assess the reproductive health service utilization and associated factors among adolescents in Anchar District. The information obtained from you is very important to improve adolescent reproductive health services especially from social or community and systems perspective. None of information obtained from you will be exposed with your name and it is confidential.

May we continue?

Yes start interview

No say thanks and stop interview

Questions for in depth interview

1. For how many years you have served in this health facility?
2. What types of reproductive health services available in this health facility?
3. How about utilization of adolescents regarding these services, especially VCT, Family planning and STI case management? If they are not utilizing as planned what are the possible causes of low utilization?
4. How about the supply for these services?
5. What do you think about the possible challenges in provision of adolescent reproductive health services?
6. Can you suggest specific ways to improve services?
7. Is there any things else you would like to add?

Interviewer notes: _____

Thank you for your cooperation

2. Religious Leaders In-depth Interview Guide

Interview site _____ date _____

Direction: my name is _____. The main aim of this interview is to assess the reproductive health service utilization and associated factors among adolescents in Anchar District. The information obtained from you is very important to improve adolescent reproductive health services especially from social or community and systems perspective. None of information obtained from you will be exposed with your name and it is confidential.

May we continue?

Yes start interview

No say thanks and stop interview

Questions for in depth interview

1. For how many years you have lived in this area?
2. What do you think about adolescents' sexual behavior from your observation?
3. What do you think about adolescents reproductive health services? Especially using of family planning, VCT services and STI cases management?
4. Can you suggest specific ways to improve services?
5. Is there any things else you would like to add?

Interviewer note: _____

Thank you for your cooperation

3. Teachers In-depth Interview Guide

Interview site _____ date _____

Direction: my name is _____. The main aim of this interview is to assess the reproductive health service utilization and associated factors among adolescents in Anchar District. The information obtained from you is very important to improve adolescent reproductive health services especially from social or community and systems perspective. None of information obtained from you will be exposed with your name and it is confidential.

May we continue?

Yes start interview No say thanks and stop interview

Questions for in depth interview

1. For how many years you have served in this school?
2. Is there any club established on anti-HIV and reproductive health? What types of services they provide? What types of information they disseminate? What types of media they use?
3. How do you think risky sexual behavior of adolescents in the school? What types of risky behavior they exhibit?
4. Can you suggest specific ways to improve services?
5. Is there any things else you would like to add?

Interviewer notes: _____

Thank you for your cooperation

Guca I. unkaa fedhii fi ibsaa

Maqaa Qorannichaa

Fayyadama tajaajila fayyaa walhormaata dargaggootaa fi dhimmota walqabani dargaggoota aanaa Ancaar

Maqaa qorataa: Musxafaa Galatoo

Maqaa Dhaabbataa: Yuunivarsitii Jimmatti Kolleejjii Meedikaalaa fi saayinsii Fayyaa Hawaasaa

Qaama ispoonsara ta'e: Yuunivarsitii Jimmaa

Unki fedhii fi ibsaa kan qophaa'eef dargaggoota umriin isaanii waggaa 15-19 ta'anii fi qorannoo kana irratti hirmaachuuf jiranidha dha.

Seensa

Kayyoon unki fedhii fi ibsaa qophaa'eef itti fayyadama fayyaa dargaggootaa(karoora maatii, qorannoo HIV fi dhibee naf-saala) fi dhimmota isaan akka hin fayyadamne ittisan qorachuudhaaf. Garee qorannoo kanaa qorataa, supparvaayzara lamaa, namoota raga sassaaban nama kudhan ofkeessatti fi gorsaa qorataa lama qaba.

Kaayyoo Qorannichaa

Kaayyoon qorannicha kanaa itti fayyadama tajaajila fayyaa walhormaata dargaggootaa(karoora maatii, qorannoo HIV fi dhibee naf-saalaa) fi sababoota akka hin fayyadamne nu godhan sakatta'uu dha. Sababoota itti fayyadama fayyaa walhormaata dargaggootaa akka nu hin fayyadamne taasisan qorachuun hir'sa du'a haadholii, daa'immanii fi baay'na dhalaa irratti gahee guddaa waan taphataniif galma barkumee keessattuu galma barkumee 4 fi 5 galmaan ga'uu keessatti gahee guddaa taphatu. Bu'aan qorannoo kana irraa argamu, kenniinsa taajajila sirrii ta'ee fi dargaggoota aanaa kenyaa giddu gala godhate karoorsuudhaaf baay'ee murteessaa dha.

Tarkaanfii/procedure

Aanaa Ancaar keessatti Itti fayyadama tajaajila fayyaa hormaata dargaggootaa fi sababoota walqabatan qorachuudhaaf isin filatamtanii jirtu, kanaaf akka irratti hirmaattaniif kabajaadhaan isin affeerra. Yoo irratti hirmaachuudhaaf fedhii qabdan ta'e gammachuu keenya ibsaa waa'ee qorannichaa isiniif akka ifa ta'u isiiniif ibsina. Dhuma irratti gaafiilee gaafatamtaniif deebii keessa keessan jiran akka nuuf kennitan isin gaafanna.

Bu'aa fi Midhaa

Qorannoo kana irratti hirmaachuun mashaqqaa xinnoo sababa yeroo xinnoo fudhachuun(daqqiqa 30) wal qabatnee isin irra gahuu danda'a. haata'u malee hirmaannaan keessan rakkoo itti fayyadama fayyaa wal hormaata dargaggootaa fayyadamuu dhoorgan adda baasuuf baay'ee murteessaa dha. Rakkoo fi bu'aan addaa qorannoo kana irra isiniif kennamu hin jiru.

Kafaltaa/Onnachiiftuu Hirmaannaa

Qorannicha kana irratti hirmaachuu keessaniif maallaqni ykn onnachiiftuun isiniif kafalamu hin jiru.

Icciiiti

Ragaan isin irraa sassaabame tokkoyyuu maqaan kee irratti hin barraa'u. Ragaan isidoo dhoksaa kan taa'uu fi enyuu argachuu hun danda'u.

Mirga diduu fi addaan kutuu

Qorannicha diduudhaafis ta'ee giddutti kutuuf mirga qabdu.

Qaama qunnamamu

Qoannaichi kun koree naamusa qorannoo Yuunivarsitii Jimmaatiin ni ilaallama. Yoo gaafii qabaattan qaamaan yookaan teessoo armaan gadiitiin na qunnamuu dandeessu.

Maqaa: Mustafa Geleto

Bilbila: +251912291736

E-mail:geletom@yahoo.com

Annex II: Afan Oromo questionnaire

Yuunivarsitii Jimmaa

Kollejjii Sayiinsii Fayyaa Hawaasaa fi Meedikaalaa

Boca fayyadama tajaajila fayyaa wal hormaata dargaggootaa fi sababoota walqabatan kan dargaggota Aanaa Ancaarii qorachuuf qophaa'e.

Seensa

Kabajamoo hirmaattotaa, kaayyoon guddaan qorannoo kanaa fayyadama tajaajila fayyaa walhormaata dargaggootaa fi sababoota itti fayyadamaan wal qabatan sakkatta'uuf kan qophaa'ee dha. Bu'aan qorannoo kana irraa argamu tarsimoo kenna tajaajila fayyaa dargaggootaa karoorsuudhaa fi itti fayyadama isaa cimsuuf baay'ee murteessaa dha. Gaafichi kan filannoo qabu yommuu ta'u ofii keessanii kan guuttanii dha. Kanaaf gaafii gaafamtan kanaaf deebii keessa keessa jiruu fi dhugaa ta'e akka nuuf kennitan kabajaadhaan isin gaafanna. Gaafii yoo qabaattan namoota ragaa sassaaban gaafachuu hin hifatinaa.

Hirmaannaa keessaniif galatoomaa!!

Qorannoo irratti hirmaachuudhaaf fedhii qabduu?

Eeyyen Lakki , (gaafii guutuu dhiisaa)

Maqaa Ragaa Sassaabaa/bduu _____ Mallattoo_____

Maqaa supparvaayzaraa _____ Mallattoo_____

Gulantaa I: gaafiilee waa'ee haala jiruu fi jireenyaan walqabatan

T.L	Gaafii	Deebii	Gara gaafii____ tti dabri
101	Saala	1. Dhiira <input type="checkbox"/> 2. dhalaa <input type="checkbox"/>	
102	Umrii	waggaa_____	
103	Haala fuudhaafi heerumaa	1. kan hin fuune/hin heerumne <input type="checkbox"/> 2. kan fuudhe/heerumte <input type="checkbox"/>	
104	Amantii	1. Ortodooksii <input type="checkbox"/>	

		2. Musliima <input type="checkbox"/> 3. kaatoolikii <input type="checkbox"/> 4. piroteestaantii <input type="checkbox"/> 5. kan biraa (ibsi)_____	
105	haala barnootaa	1. amma barachaa jira <input type="checkbox"/> 2. amma barachaa hin jiru <input type="checkbox"/>	
106	Sadarkaa barnootaa	1. Kan barreessuu fi dubbisuu hin dandeenye <input type="checkbox"/> 2. Kan barreessuu fi dubbisuu danda'u <input type="checkbox"/> 1. kutaa 1-8 <input type="checkbox"/> 2. 9 fi isaa ol <input type="checkbox"/>	
107	umrii haadhaa waggaadhaan	waggaa _____	
108	umrii abbaa waggaadhaan	waggaa _____	
109	Sadarkaa barnoota haadhaa	1. kan dubbisuu fi barreessuu hin dandeenye <input type="checkbox"/> 2. dubbisuu fi barreessuu kan danda'an <input type="checkbox"/> 3. sadarkaa tokkoffaa (1-8) <input type="checkbox"/> 4. Sadarkaa lammaffaa fi isaa oli (≥ 9) <input type="checkbox"/>	
110	Sadarkaa barnoota abbaa	1. kan dubbisuu fi barreessuu hin dandeenye <input type="checkbox"/> 2. dubbisuu fi barreessuu kan danda'an <input type="checkbox"/> 3. sadarkaa tokkoffaa (1-8) <input type="checkbox"/> 4. Sadarkaa lammaffaa fi isaa oli (≥ 9) <input type="checkbox"/>	
111	Baasii maatii keessanii giddu galeessatti ji'aan hangami?	qarshii _____	

112	Yeroo ammaa eenyu wajji jiraatta?	7. Kophaa kiyya <input type="checkbox"/> 8. Abbaa fi haadha kiyya wajji <input type="checkbox"/> 9. Abbaa kiyya qofa wajji <input type="checkbox"/> 10. Ummaa tiyya qofa wajji <input type="checkbox"/> 11. Fira kiyya wajji <input type="checkbox"/> 12. Kan biraa (ibsi) _____	
113	madda infoormeshiinii	6. Raadiyoo dalagu <input type="checkbox"/> 7. Televijiina dalagu <input type="checkbox"/> 8. Bilbila dalagu <input type="checkbox"/> 9. Gaazexaa/barruulee <input type="checkbox"/> 10. Kan biraa (ibsi)_____	

Gulantaa II: haala qunnamtii saalaa fi hordoffii maatii ilaalchisee

T.L	Gaafilee	deebii	gara gaafii__ tti dabri
201	Umrii kee keessatti jaalallee ni qabdaa?	1. eeyye <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo lakki ta'e gara gaafii 203 tti dabri
202	umrii kee keessatti jaalallee meeqa qabda?	1. tokko <input type="checkbox"/> 2. lamaa fi isaa oli <input type="checkbox"/>	
203	walqunnamtii saalaa	1. eeyyee <input type="checkbox"/>	

	gootee ni beettaa?	2. lakki <input type="checkbox"/>	
204	ji'a kudha laman dabran walqunnamtii saalaa gootee ni beettaa?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	
205	umrii kee keessatti walqunnamtii saalaa si'a meeqa goote?	1. si'a takka <input type="checkbox"/> 2. namuma tokko wajjiin si'a tokko oli <input type="checkbox"/> 3. yeroo tokko oli nama gara garaa wajjiin <input type="checkbox"/>	
206	yeroo boqonnaa keetii/ baruumsaan alaa eessatti akka dabarsitu maatiin si gaafataa?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 207 tti dabri
207	Akkam isin gaafatu?	1. yeroo hunda <input type="checkbox"/> 2. yeroo tokko tokko <input type="checkbox"/> 3. baay'ee xiqqishuu dha <input type="checkbox"/>	
208	Maatiin keessan yeroo keessan akkamitti akka dabarsitan isin gaafatuu?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	
209	Maatiin keessan waa'ee hiriyoota keessanii isin gaafatuu?	1. eeyyee <input type="checkbox"/> 2. Lakki <input type="checkbox"/>	
210	Hiriyoota keessan wajjiin halkan turuudhaaf maatii ni hayyamsiifattuu?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	

Gulantaa III: itti fayyadama karoora maatii fi sababoota isaan wal qabatan ilaalchisee

T.L	gaafiilee	deebii	gara gaafii --- tti dabri
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301	Waa'ee karoora maatii dhageessanii beektuu?	1. eeyyeen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 302 tti dabri
302	Eessa dhageessan? (deebiin tokko oli deebisuun ni danda'ama)	1. Raadiyoo <input type="checkbox"/> 2. Televijiinii <input type="checkbox"/> 3. gaazexaa/barruulee <input type="checkbox"/> 4. maatii/fira <input type="checkbox"/> 5. hiriyoota <input type="checkbox"/> 6. barsiisaa <input type="checkbox"/> 7. Paampileetii/poosterii <input type="checkbox"/> 8. Ogeessota fayyaa <input type="checkbox"/> 9. kan biraa(ibsi) _____	
303	Iddoo tajaajilli karoora maatii itti kennamu ni beektuu?	1. eeyyeen <input type="checkbox"/> 2.lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 304 tti dabri
304	Eessatti kennama? (deebii tokko oli kennuun ni danda'ama)	1. Bu/Fayyaa <input type="checkbox"/> 2.Keellaa fayyaa <input type="checkbox"/> 3. kilinika dhuunfaa <input type="checkbox"/> 4. kan biraa(ibsi) _____	
305	Waa'ee karoora maatii mari'attanii	1.eeyyee <input type="checkbox"/>	yoo eeyyee ta'e

	beektuu?	2. lakki <input type="checkbox"/>	gara gaafii 306 tti dabri
306	Eenyu wajjiin mari'attan? (deebii tokko oli deebisuun ni danda'ama)	1. maatii <input type="checkbox"/> 2. hiriyoota <input type="checkbox"/> 3. hiriya/nama walqunnamtii saalaa wajjiin raawwatne wajjiin <input type="checkbox"/> 4. barsiisaa <input type="checkbox"/> 5. kan biraa(ibsi) _____	
307	umrii keessan keessatti isin/namni wajji walqunnamtii gootan karoora maatii fayyadamtanii beektuu (yoo wal qunnamtii gotanii jirtan ta'e)?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo lakki ta'e gara gaafii 311 tti dabri
308	Gaafa guyyaa jalqaba walqunnamtii saalaa raawwattani isin/namni wajjiin walqunnamtii saala gootan karoora maatii fayyadamtanii jirtuu?	1. eeyyeen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	
309	Gaafa guyyaa dhumaa walqunnamtii saalaa raawwattan isin/namni wajjiin walqunnamtii saalaa raawwattan karoora maatii fayyadamtanii jiruu ?	1. eeyyen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	
310	Tajaajila karoora maatii eessaa argatte? (deebii tokko oli kennuun ni danda'ama)	1. Buufata Fayyaa <input type="checkbox"/> 2. Keellaa Fayyaa <input type="checkbox"/> 3. Kilinika dhuunfaa <input type="checkbox"/> 4. Faarmaasii <input type="checkbox"/>	

		5. Kan biraa(ibsi) _____	
311	Sababni karoora maatii hin fayyadamneef maalii dha? (deebii tokko oli kennuun ni danda'ama)	1. karoora maatii fayyadamuuf umriin koo hin geenye <input type="checkbox"/> 2.tajaajila argachuuf nan sodaadhe/saalaye <input type="checkbox"/> 3.akkamitti akka karoora maatii fayyadaman hin beeku <input type="checkbox"/> 4.Amantaan koo na dhoorga <input type="checkbox"/> 5.hiriyaan koo na dhoorga <input type="checkbox"/> 6.rakkoo natti fida jedheen sodaadhe <input type="checkbox"/> 7.gatii tajiila argachuuf kafalu <input type="checkbox"/> 8.gosa tajaajila ani bardaadduu hin argatne <input type="checkbox"/> 9.saa'aa tajaajilichaa mijjaa'aa miti <input type="checkbox"/> 10.yeroon tajaajila argachhuf fudhatu dheeraa dha <input type="checkbox"/> 11.ogeeyyotni icciitii hin eegan <input type="checkbox"/> 12. ogeeyyoni fayyaa ilaalcha gaarii hin qaban <input type="checkbox"/> 13.kan biraa(ibsi) _____	

Gulantaa IV: itti fayyadama qorannoo fi yaala dhibee naf-saalaa fi sababoota walqabatan

T.L	gaafilee	deebii	gara gaafii --- tti dabri
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401	Waa'ee yaala dhibee naf-saalaa dhessanii beektuu?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 402tti dabri
402	Eessaa dhageessan (deebii tokko oli kennuun ni danda'ama)	1. Raadiyoo <input type="checkbox"/> 2. Televijiinii <input type="checkbox"/> 3. Gaazexaa/Barulee <input type="checkbox"/> 4. Maatii/fira <input type="checkbox"/> 5. hiriyoota <input type="checkbox"/> 6. barsiisaa <input type="checkbox"/> 7. paampileetii/poostara <input type="checkbox"/> 8. ogeeyyii fayyaa <input type="checkbox"/> 9. kan biraa(ibsi) _____	
403	iddoo tajaajilli qorannoo fi yaalli dhibee naf-saalaa itti kennamu ni beektuu?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 404tti dabri
404	Eessatti kennama? (deebii tokko ol kennuun ni danda'ama)	1. Buufata Fayyaa <input type="checkbox"/> 2. Kilinika dhuunfaa <input type="checkbox"/> 3. kan biraa(ibsi) _____	
405	Waa'ee tajaajila qorannoo fi yaala dhibee naf-saalaa mari'attanii beektuu?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 406tti dabri
406	Eenyu wajjiin mari'attan? (deebiin tokko oli kennuun ni danda'ama)	1. maatii <input type="checkbox"/> 2. hiriyoota <input type="checkbox"/> 3. nama walqunnamtii saalaa wajji raawwatne wajjiin <input type="checkbox"/> 4. barsiisaa <input type="checkbox"/> 5. kan biraa(ibsi) _____	
407	mallattoo kanneen of irratti argartanii ni beektuu? (deebii tokko oli	1. Yeroo finaantan miira gubuu isinitti dhagahamuu <input type="checkbox"/> 2. Dhangal'oon qaama saala keessaa ba'u	

	deebisuun ni danda'ama)	foolii badaa qabaachuu <input type="checkbox"/> 3.Madaa'uu qaama saalaa <input type="checkbox"/> 4.Naannoo qaama saalaa hooqsisuu <input type="checkbox"/> 5.Naannoon qaama saalaa dhiita'uu <input type="checkbox"/> 6.Mallattoo armaan olii tokkollee hin agarre <input type="checkbox"/>	
408	mallattolee armaan olii kessaa tokko yookaan isaa oli yoo agartee jirta ta'e tajaajila yaalaa argattee jirtaa?	1. eeyyee <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo lakki ta'e gara gaafii 410 tti dabri
409	Tajaajila eessaa argattan? (deebii tokko oli kennuun ni danda'ama)	1.Buufata Fayyaa <input type="checkbox"/> 2. Kilinika dhuunfaa <input type="checkbox"/> 3. Faarmaasii <input type="checkbox"/> 4. Keellaa Fayyaa <input type="checkbox"/> 5. Wal'aansa aadaa <input type="checkbox"/> 6. kan biraa(ibsi) _____	
410	Maaliif tajaajila argachuu hin barbaadne? (deebii tokko oli filachuun ni danda'ama)	1.Nan sodaadhe/ saalaye <input type="checkbox"/> 2.Gatiin tajaajilaa ni qaalaye <input type="checkbox"/> 3.Saa'aan tajaajilaa hin mijjaa'u <input type="checkbox"/> 4. Taajaajila argachuuf yeroo dheera nama tursiisu <input type="checkbox"/> 5. Hojjattootni fayyaa icciitii hin eegan <input type="checkbox"/> 6. Hojjattootni fayyaa ilaalcha gaarii hin qaban <input type="checkbox"/> 7.Kan biraa (ibsi) _____	

Gulantaa V: itti fayyadama qorannoo dhiigaa fi sababoota isaan wal qabatan ilaalchisee

T.L	Gaafii	deebii	gara gaafii ---tti dabri
501	Wa'ee qorannoo HIV	1. eeyyee <input type="checkbox"/>	yoo eeyyee ta'e

	dhageessanii beektuu?	2. lakki <input type="checkbox"/>	gara gaafii 502 tti dabri
502	eessaa dhageessan (deebiin tokko oli deebisuun ni danda'ama)	1. Raadiyoo <input type="checkbox"/> 2. Televijiinii <input type="checkbox"/> 3. Gaazexaa/barruulee <input type="checkbox"/> 4. Maatii/Fira <input type="checkbox"/> 5. Hiriyoota <input type="checkbox"/> 6. Barsiisaa <input type="checkbox"/> 7. paampileetii/poostarii <input type="checkbox"/> 8. Ogeessota fayyaa <input type="checkbox"/> 9. kanbiraa (ibsi) _____	
503	Iddoo qorannoon dhigaa itti kennamu ni beektuu?	1. eeyyeen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 504 tti dabri
504	Tajaajilichi eessatti kennama? (deebii tokko oli kennuun ni danda'ama)	1. Buufata fayyaa <input type="checkbox"/> 3. kilinika dhuunfaa <input type="checkbox"/> 4. kan biraa (ibsi) _____	
505	Waa'ee qorannoo dhiigaa mari'attanii beektuu?	1. eeyyeen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 506 tti dabri
506	Eenyu wajji mari'attan? (deebii tokko oli deebisuun ni danda'ama)	1. maatii <input type="checkbox"/> 2. hiriyoota <input type="checkbox"/> 3. hiriyaa /nama walqunnamtii saalaa wajjiin goone wajjiin <input type="checkbox"/> 4. Barsiisaa <input type="checkbox"/> 5. kan biraa(ibsi) _____	
507	HIV/AIDSII dhaaf nan saaxilama jettee yaaddaa?	1. eeyyen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo eeyyee ta'e gara gaafii 508 tti dabri

508	HIV/AIDSII dhaan nan saaxilama jettee hangama yadda?	3. Baay'ee saaxilama jedheen shakka <input type="checkbox"/> 4. Xinnodhuma shakka <input type="checkbox"/>	
509	Tajaajila qorannoo dhiigaa argattanii beektuu?	1. eeyyen <input type="checkbox"/> 2. lakki <input type="checkbox"/>	yoo lakki ta'e gara gaafii 509 tti dabri
510	Tajaajilicha eessaa argattan? (deebii tokko oli kennuun ni danda'ama)	1. Buufata fayyaa <input type="checkbox"/> 2. kilinika dhuunfaa <input type="checkbox"/> 3. kan biraa(ibsi) _____	
511	Tajaajila wanti hin barbaadneef maalii dha ? (deebii tokko oli kennuun ni danda'ama)	1. Nan sodaadhe/saalaye <input type="checkbox"/> 2. gatii tajaajila argachuuf kafalu <input type="checkbox"/> 3. Saa'aan tajaajilaa hin mijaa'u <input type="checkbox"/> 4. Tajaajila argachuuf yeroo dheeraa natti fudhata <input type="checkbox"/> 5. Ogeeyyiin fayyaa icciitii hin eegan <input type="checkbox"/> 6. Ilaalchi ogeeyyii fayyaa gaarii miti <input type="checkbox"/> 7. Kan biraa(ibsi) _____	

Declaration

I undersigned declare that this thesis is my original work, has not been presented for degree in this or another university and that all sources of materials used for thesis have been fully acknowledged.

Name: **Mustafa Geleto(BSc)**

Signature_____

Date 05/06/2013

This thesis work has been submitted to the department of Health Services Management after examination with my approval as university advisor

Name of first advisor: **Challi Jira(MPH, PHD) professor of Health Services Management**

Signature: _____

Date: _____

Name of second Advisor: **Fikru Tafese(BSc, MPH)**

Signature_____

Date_____