

MAGNITUDE OF AND ASSOCIATED FACTORS WITH SEXUALLY TRANSMITTED DISEASES AMONG REPRODUCTIVE HEALTH CLIENTES ATTENDING PUBLIC HEALTH INSTITUTIONS IN SHASHEMENE TOWN WEST ETHIOPIA



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A RESEARCH REPORT TO BE SUBMITTED TO COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCE DEPARTMENT OF EPIDEMIOLOGY JIMMA UNIVERSITY IN PARTIAL FULFILLMENT FOR THE REQUIREMENT FOR MASTERS OF GENERAL PUBLIC HEALTH

JUNE 2015 JIMMA, ETHIOPIA

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JUNE, 2015

ABSTRACT

Background: *Sexually transmitted Infections remain a major public health challenge because of their health consequences, severe complications and sequelae, especially among women who excessively bear their long-term consequences. STDs can lead to serious health complications and affect individual's future reproductive plans and responsible for some 17% of the total burden of disease.*

Objective: *To Determine magnitude of STIs and associated factors of clients attending public health institutions in Shashemene town Administrative West Ethiopia 2015*

Methods: *An institution based cross sectional study was conducted among clients attending Public health institutions in the Shashemene town from Jun 13-Feb 13. Data were collected from 380 respondents by using systematic sampling technique with proportional allocation of size employed to each health institutions. Structured interview questionnaires were used to collect the data. Data was checked for its completeness and edited, cleaned, coded, entered into the computer using Epi-data 3.1 software and transferred to SPSS-version 16.0 for analysis. Descriptive statistical analysis was done to explore the data and calculate summary values. Multiple logistic regression analysis was performed to isolate independent predictors of STDs. P-value < 0.05 under 95% CI was considered as having significant association with outcome variable.*

RESULTS: *The prevalence of reported STDs in the past 12 months prior to the survey was found to be 25.3%. Almost all (98.9%) reported to have heard of STIs and 151 (40.7%) study subjects reported to use condom once in their life. But only 10% had used condom consistently. 34(27.6%) study subjects had not got treatments for the recent syndrome they had. While assessing the independent predictors for acquiring STIs, clients who had sexual intercourse after having alcohol in the last 12 months (AOR= 3.45; 95%CI:1.28,9.5), clients who had multiple sexual partner in the last 12 months 3.67(95%CI: 1.16,8.76). Clients who started sexual intercourse before 18 years AOR 2.88(CI, 95 % (0.27, 10.03). As well, age category and number of sexual partner in the life time were significantly associated with odds AOR 2.84 (1.62, 4.96) and AOR 95%2.34(1.36, 4.0) of STDs respectively.*

CONCLUSION: *This study shows that attendants reported significant proportion of syndromes of STIs. Also determinants like Demographic variable age category and risky sexual behaviors like having multiple sexual partners, sexual intercourse after having alcohol, number of sexual partners in the last 12 months, age at 1st sexual intercourse were significantly associated with STDs.*

Every STD consultation should be opportunity for preventive education including lowering the number of sexual partners, in order to lower the risk of STD.

Key words: *Sexually transmitted infection, reproductive tract infection, vaginal discharge, genital ulcer, knowledge, number of sexual partners, sex at first sexual intercourse, condom utilization.*

ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to my advisors Mr. Abduhalik Workicho and Mr. Hailay Abrha for their constructive Comments, suggestions, ideas and advice in writing this research report and consistent guidance, for subsequent research activities. I would like to thank also Jimma University, CHS Department of Epidemiology, for giving me this chance. I also would like to thank health institutions for their provision of necessary information. At last for all my friends and my families who provide constructive comment during all steps of this research paper development.

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Acronyms

STD=Sexual Transmitted Disease

STI = Sexually Transmitted Infection

WHO=World Health Organization

DALYs =disability adjusted life years

HPV = Human papillomavirus

EPHA=Ethiopian public health association

MOH=Ministry of health

NGOS=Non Governmental Organization

HIV = Human Immunodeficiency virus

AIDS =Acquired Immune Deficiency Syndrome

RTIs=Reproductive tract infection

CSW=commercial sex workers

MSP=multiple sexual partner

CHAPTER ONE

1. INTRODUCTION

1.1 BACKGROUND

There are literally dozens of actually STDs, but there is a difference in the pathology of a disease and an infection. STD refers to infections that are causing symptoms, while the real issue with this group of infections is that many people remain carriers and transmitters without showing symptoms. Infections that can be transmitted from one person to another through sexual contact, Sexual contact includes: vaginal, anal or oral sexual intercourse; kissing; oral-genital contact; and the use of sexual “toys” such as vibrators. The term sexually transmitted infection applies to more than 20 different infections. It is estimated that more than 340 million new cases of curable sexually transmitted diseases (STDs) occur every year throughout the world among adults aged 15–49 years, with the second largest proportion in the region of sub Saharan Africa (1).

Excluding HIV, STDs account for a substantial proportion of outpatient health care visits among adults of 15–49 years and in most nations STDs rank among the top five leading causes that individuals seek health care (2). In fact, reported STIs represent only the “tip of the iceberg” because most infections—typically more than half of any specific diagnoses regardless of bacterial or viral etiology are entirely asymptomatic or if symptoms exist often unrecognized (3-5). This is especially true for women (6-8). In a rare study conducted in Morocco, 40.0% of STDs recorded were among young adults aged 15 to 29, putting the estimated number of new infections among this age group at 240,000 per year (9). The situation in Ethiopia is not different from that of other countries mentioned above. In a study conducted to investigate young people’s sexual and reproductive health(SRH) needs and utilization of services in selected regions of Ethiopia, a considerable proportion of young people were found to be practicing risky behavior: about 39.2% reported having had sexual intercourse and 7.6% of them had early sexual debut before the age of 15 years. Moreover, 45.1% acknowledged having had more than one sexual partner, 15.8% admitted having had sexual intercourse with commercial sex workers, and 34.9% reported having had reproductive health problems, of which 28.7%, 24.1%, and 45.1% claimed to have had unwanted pregnancy, abortion and STDs, respectively in their life time (10). STDs are important because of their magnitude, potential complications and their interaction with HIV/AIDS.

In addition to some STDs increasing the risk of HIV transmission, also problematic is the long term sequelae which include infertility, tubal pregnancy, chronic pain in the pelvis and cervical cancer. In Ethiopia, relatively few epidemiological surveys had been carried out on the prevalence and incidence of STDs. However, the problem of STIs in Ethiopia is generally believed to be similar to other developing countries. The Integrated Disease Surveillance Team of the Ministry of Health compiled 58,623 and 27,947 STDs cases in 2002 and 2003 respectively using routine quarterly reports (11).

1.2 STATEMENT OF THE PROBLEM

Sexually transmitted diseases (STDs) are a group of infectious or communicable diseases in which the primary mode of transmission is through sexual contact and are among the major causes of illnesses in the world profile especially in the developing countries (12) Sexually transmitted diseases (STDs) are also a significant public health problem, ranking them first among the top causes of disability-adjusted-life-years (DALYs) lost in urban populations in the developing world.(13)A pilot study was carried out among 65 married women of reproductive age group, the prevalence of STI was found to be 49% Parol PHC in India.(14) .

STDs are important because of their magnitude, potential complications and their interaction with HIV/AIDS. The World Health Organization estimated that each year more than 340 million new curable STIs occur in reproductive-aged men and women; this excludes the estimated 33 million new cases of HIV as well as estimated 100 million plus infections caused by other viral STDs each year (15).

Currently approximately 12 million cases of STDs occur in the US yearly, mostly among young people 15–29 years of age.(16) Sexually transmitted infections are of public health concern not only because of their high prevalence worldwide, but also because of their potential to cause serious and permanent complications in infected people who are not treated in a timely and effective way. In addition they are known to facilitate HIV (17). Moreover, the impact of STDs on pregnancy outcome and on the neonate is grave. Beyond the pain and discomfort of acute illness, women often experience long-term impairment of their reproductive health as a consequence of these reproductive tract infections.(18) .

It is estimated that more than 340 million new cases of curable sexually transmitted infections (STDs) occur every year throughout the world among adults aged 15–49 years, with the second largest proportion in the region of sub Saharan Africa (19). In an STDs survey conducted in Ethiopian two third (65.9%) presented with vaginal discharge, a quarter (25.1%) with urethral discharge, and 76 (17.6%) with genital ulcer. *N. gonorrhoea* was the leading pathogen that caused urethral discharge in males as compared to females with vaginal discharge and bacterial Vaginosis was the common cause of vaginal discharge in females. Syphilis (24.0%) was the second leading cause of genital ulcer in males as compared to females (20). Another set of indicators of prevalence of STDs, epidemiologic and biologic studies demonstrate the ulcerative STDs and non-ulcerative

STDs are important cofactors for HIV transmission. Having STDs increase the risk of activating HIV from 2 to 9 times (21). The World Bank has estimated that STDs, excluding HIV, are the second commonest cause of healthy life years lost by women in the 15–44 age group in Africa, responsible for some 17% of the total burden of disease.(22)

Data from the sentinel surveillance in Zimbabwe show that the prevalence of the common sexually transmitted infections (gonorrhoea, syphilis and trichomoniasis) are also thought to be relatively high (20%) among women attending MCH/FP clinics in the region (23). The overall yearly incidence rate of curable STDs in Africa is estimated at 254 per 1000 people in reproductive ages (15–49years), but is only 77–91 per 1000 in industrialized countries.(23)

Poverty and lack of appropriate information which is very common in developing countries makes individuals more vulnerable to STDs including HIV /AIDS. In Ethiopia, among men of age 15-19 and 20-24 nearly 5% and 2% had experienced STDs or associated symptoms respectively. A descriptive quantitative cross sectional study carried out to assess KAP to ward STDs among high school students of Shashemene town from may to June 2007. Out of a total 353 (male 241, Female 112) students majority (91%) of students have heard of STDs. (25)

Social factors also make an individual more susceptible to risk-taking behaviors, thereby increasing the risk for STDs. These social factors include educational status, socio-economic status, marital status, type of family, religion, etc. (26)

The sequelae of STDs are more serious in women because of the risk for ascending infections leading to pelvic inflammatory disease (PID), infertility, ectopic pregnancy and Increased risk of cancer of the genital tract and causes HIV (27) STIs is useful marker for un protected sex and also as a co-factor for HIV transmission. There are limited studies in our country. This study will provide prevalence and associated factors of STIs among reproductive health services using clients in Shashemene town west Arsi-zone Oromia, Ethiopia.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

The term sexually transmitted diseases (STDs) refers to a variety of clinical syndromes caused by pathogens that can be acquired and transmitted through sexual activity (28). Sexually-transmitted infections (STIs) are leading cause of adverse pregnancy outcomes, including low birth weight, stillbirth and maternal mortality. Furthermore, STDs may cause cervical cancer and primary liver cancer, the most common forms of cancer worldwide.(29)

In general, the prevalence of STIs tends to be higher in urban residents, in unmarried individuals, and in young adults. STDs tend to occur at a younger age in females than in males, which may be explained by differences in patterns of sexual activity and in the relative rates of transmission from one sex to the other.(30) A person infected with an STD is more likely to become infected with human immunodeficiency virus (HIV), and a person infected with HIV and other STDs are more likely to transmit HIV.(31) A recent study in Bangladesh, revealed a prevalence of 28% for gonorrhoea among sex workers, while 57.1% of street female sex workers(SFSWs) were positive for syphilis, though none were HIV positive.(32)

2.2 Prevalence of STIs among clients using health institutions

Institutional survey done in India on prevalence of sexually transmitted infections was symptomatically 39%, the most common presenting symptom was vaginal discharge (36.4%) followed by Burning Micturition (24.7%), Vulval itching (17.3%), Lower abdominal pain (13%) & Genital ulcer (8.6%).(33) In developing countries, STDs prevalence is much higher, now ranking among the top ten most important health problems (34).

Prevalence of any of the 5 STDs was 24.1% among all and 37.7% among sexually experienced female adolescents. HPV (23 high-risk types or type 6 or 11) was the most common STI among all female adolescents (prevalence: 18.3%), followed by *C trachomatis* infection (prevalence: 3.9%). Prevalence of any of the STIs was 25.6% among those whose age was the same or 1 year greater than their age at sexual initiation and 19.7% among those who reported only 1 lifetime sex partner. Prevalence rates for the most common STDs in developing countries range between 1 and 20 percent for low-risk groups and are reported as high as 40 percent in commercial sex workers. (35)institution based cross sectional study, lack of access to reproductive health information (AOR= 2.6; 95% CI 1.3- 5.0), and history of multiple sexual partners (AOR= 3.0; 95% CI 1.9- 8.4) were significantly association with sexual transmitted infection.(36) Reported epidemiological studies showed varied STD/HIV prevalence among STD clinic attendees in China, with HIV ranging from 0% to 12.6%,

Chlamydia trachomatis from 6.3% to 30.3%, gonorrhoea from 4.1% to 17.3% and syphilis from 9.1% to 23.2% (37)

Data regarding the prevalence of STDs in Ethiopia are scarce. However, available evidences in Ethiopia reported a prevalence of STIs among antenatal clinic attendees as high as 43% (38) and among students up to 12% (39). Mixed STIs have been documented among young people in Addis Ababa (40). The prevalence of double infection with Chlamydia and gonorrhoea infection among sexually active youth was 4.8% (41).

Furthermore, STDs are one of the common causes of outpatient visits (42). These figures show the state of HIV prevention and control efforts in the country as HIV and STIs share common risk behaviors and routes of transmission. On top of that, the existence of STIs can fuel HIV acquisition and transmission (43). The report by Klouman et al. in Tanzania where they found the highest rate of STIs among 25–34 years of age females and 35 to 44 age group of males Considerably STIs affected women (78.6%) in the town(44)

2.3 Factors associated STI among client's attending public health institutions

2.3.1 Socio-demographic and economic factors

The most socio-demographic and economic attributes affecting sexual transmitted infections in developing countries are: age, gender, education, income, religion marital status multiple and concurrent sexual partnerships increase in levels of prostitution through economic hardship etc. Sexual behavior patterns – STI infections in adolescent females have been associated with contact with older partners.

In study in Namibia no STDs infections were detected in young sexually active males, which suggested that their sexual partners were young, as yet infection-free, girls (45).

Poverty does impact on adolescent health. Poor individuals are likely to live in environments that do not support health-promoting activities. It is not only specific behaviors that place individuals at risk, but also the fact that the environment in which they find themselves often precludes them from the information, motivation, skills and funds required to make healthy choices. The disadvantages of poverty are also overlaid by disparities arising from age, culture, and gender (46)

survey in Jamaica where reported sexual experience rose from 35.5% at age 15 years to 87.8% at age 19 years for females, and from 42.7% to 95.3% for corresponding ages in males (47). Compared with older adults, sexually active adolescents aged 15–19 years and young adults aged 20–24 years are at higher risk of acquiring

STDs for a combination of behavioral, biological, and cultural reasons. In developing countries, STD prevalence is much higher, now ranking among the top ten most important health problems (48).

The study done in Addis Ababa , found the highest rate of STIs among 25–34 years of age females and 35 to 44 age group of males Considerably STIs affected women (78.6%) in the town, the most frequent chief complaints of study participants were vaginal discharge (38.38%), combination of the sign and symptoms (28.7%) and urethral discharge (13.58%).(49)

It is to be expected that educational attainment is associated with higher rates of condom use. Those with better education are likely to have better access to information about HIV/AIDS. The findings of this study also show that the use of alcohol and problem drinking are associated with unprotected sex. FSWs for longer periods, and have assumed or knew that they had already been infected with HIV, thus reducing their motivation for practicing safer sex. (50)

The poor knowledge that the young have and their risky sexual practices would add fuel to the already existing fire. The 2005 DHS in Egypt revealed that only 18.0% of married women aged 15 to 24 had heard of Gonorrhea, Syphilis or Chlamydia. And it is only in 4 out of 19 Sub-Saharan countries, where more than 10.0% of unmarried adolescents use modern contraceptives (51) an early onset of sexual activity also increases the probability of having various sexual partners over a lifetime and In addition increases the chances of contracting an STI. (52).The less educated women are more likely to affect from STIs due to lack of health care knowledge. Educated women are more capable to seek the source of treatment and they can use health care facilities more efficiently and Women from the rural areas and lower income groups are more likely to affect from RTIs/STIs.(53)

2.3.2 Sexual behavior

A more sexually experienced partner may also expose an individual to a wider spectrum of infection, particularly gonorrhea, trichomoniasis, genital ulcer disease and HIV. Sexually active individuals place themselves at risk of an STI when they engage in unprotected sex. The health of the poor is generally worse than the health of the non-poor regardless of age, and poverty does impact on adolescent health. Poor adolescents are likely to live in environments that do not support health-promoting activities. (54) sexual and contraceptive lifestyles of women in *England* found a diverse pattern in terms of age of first intercourse, number of sexual partners and attitudes to the timing of sexual intercourse within relationships. (55).

According to the study done Saudi Arabia, of the 115 participants, 18 were positive for one or two STIs, including HIV (n = 5), HBV (n = 5), and syphilis (n = 11). Three of the eleven patients with syphilis also had HBV. More than half of the patients (55.5%) in the group with STIs were addicted to hashish. Up to 55.5% of the patients in the STI-positive group were IDUs as compared with the 32.9% who were IDUs in the STI-negative group.(57)

The mean age at first sex was 23.6 years (SD _ 2.9 years), and 16% of the pregnant women had their first sex at age _20 years. During pregnancy, 364 (72.5%) of 502 women had had sex. One hundred fifty-two (41.7%) of 364 of these women usually had more than 4 sex acts per month, but only 11 (3.0%) of 363 consistently used condoms, and 24 (6.6%) of 363 used condoms for more than half of their sex acts. Only 33 (9.1%) of 362 women used a condom at last sex.(58) Study done among young adults in Dessie condom utilization was 56.8 %(62). The study done in Ethiopia on Female sex workers, alcohol use on a daily basis were found to have a two-fold increased risk of having sexually transmitted infections (STIs) compared to the non-users of alcohol: AOR (95% CI) = 2.50 (1.35, 4.64) (60), and with study done in SNNP Ethiopia (AOR=2.05; 95% CI: 1.07, 3.94). (64).

2.3.3 Health service related factors among clients using health institutions

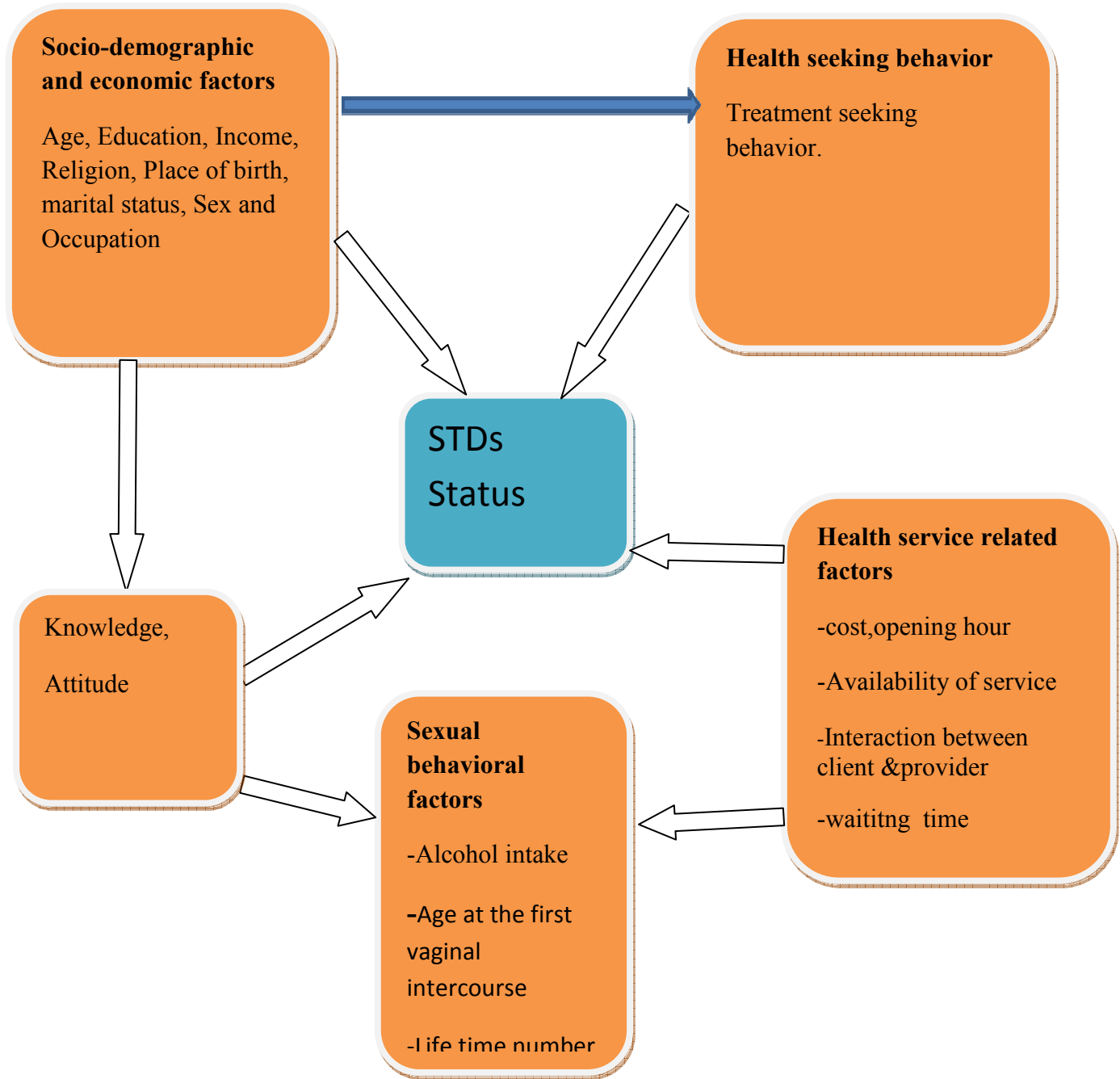
People seeking treatment for STIs face numerous problems, especially in resource-poor countries. These include stigmatization, inappropriate treatment, and little or no follow-up of sexual partners (56). Reproductive Tract Infections also include infections that results from inadequate infection prevention practices by health care providers. The women those reported high prevalence of STIs is less likely to get the treatment from public and private sources. Without proper treatment of STIs, it leads to HIV/AIDS. (52) Various factors affect access to STI services in Ethiopia. This includes distance, weak infrastructure, and quality of health services, socio-

cultural factors, and male dominance. Several studies (all in STI clinics) have shown that between 50 and 60% of patients attending STI clinics first seek care outside the formal health care system, most often at traditional healers (59). The study shows Respondents who had at least four life-time sexual partners were 2.9 ($p < 0.05$) times more likely to have contracted STDs than those with only one partner. The total lifetime number of sexual partners was significantly associated with contracting STDs. A higher percentage of those who had multiple sexual partners contracted STDs than those with only one sexual partner. This finding is expected, as previous reports from the literature consistently attributed STDs to multiple sexual partners. Increasing sexual partners increases the risk of contracting STDs, particularly in a population where the prevalence of STDs is high (61)

CONCEPTUAL FRAM WORK

Sexual transmitted infections are believed to be influenced by a complex interaction of many factors at individual, Socio-demographic and economic, Health seeking behavior and service delivery levels. Socio-demographic and economic factors such as Age, Education, Income Religion, Place of birth Marital status, Alcohol intake, Sex, Occupation. Sexual behavioral factors (Multiple and concurrent sexual partnerships), Health seeking behavior (Lack of access to effective and affordable STI services), knowledge, Attitude, service delivery directly or indirectly influence prevalence of STIs.

DIAGRAMMATIC CONCEPTUAL FRAMEWORK



Source:-Adapted from Bonerma and Wier, 2007

Figure 1: conceptual framework of Magnitude and associated factors of STDs among reproductive health attending clients in Shashemene town administration, Oromia region 2015

SIGNIFICANCE OF THE STUDY

Sexually transmitted diseases (STDs) have emerged as major health, social and economic problems in many parts of the developing world. Prevention of the STDs/HIV epidemic, like other infectious diseases, depends on having a good understanding of the determinants of the spread of the infections.

In addition to this there is scarcity of study done about STIs on most of developing countries including Ethiopia.

Providing base line information's for those who are interested to implement activities focusing on the issues that requires immediate action depending on the result. It adds knowledge about prevalence of STDs and Information from the study was fed back to the health institutions under study so that the health institutions may improve their service provision. The overall objective to the study is to find out prevalence of STIs and associated factors among clients using public health institutions in Shashemene town. Important lessons learnt were replicated in other STI clinics in the country for STD service quality improvement.

CHAPTER THREE

3. OBJECTIVE OF THE STUDY

3.1 General Objective

To Determine magnitude of and associated factors with sexually transmitted diseases among reproductive health Clients attending public health institutions in Shashemene town west Ethiopia, 2015

3.2 Specific objective

1. To assess prevalence of STDs of clients attending Public health institutions in Shashemene Town, 2015
2. To identify factors associated with STDs transmission among clients attending Public health institutions in Shashemene town, 2015

CHAPTER FOUR -METHODS AND MATERIALS

4.1. STUDY AREA AND PERIOD

The study was conducted in Public health institutions of Shashemene town West Arsi Zone Oromia Regional state Ethiopia. This is located 250km south of Addis Ababa. Total population of Shashemene town is 157,604 (male= 77,226 and Female = 80,378).Population of reproductive age group (15-49) is 34,673. Shashemene town have two government hospitals, one private hospital, three functional health centers and the total Family planning coverage of the year 2006 E.C. in Shashemene town is 96%.The town is commercial center, from all directions of the country there are high number of population flow. A business city in the south is economically important and expanding quite rapidly compared to other towns. This is perhaps due to its location as a crossroad and a junction point for most towns located in the southern part of the country. It serves as an international highway route connecting Ethiopia with Kenya. The town also lies within the Ethiopian Rift Valley and is close to the lakes and holiday resorts of Awassa, Langanu and the Shala-Abiyata Park. Data were collected from Jun 13-Feb 13, 2015.

4.2. STUDY DESIGN

An institution based cross sectional study was conducted.

4.3. POPULATON

4.3.1. SOURCE POPULATION

All clients of reproductive age groups (15-49) eligible for reproductive health service in the Shashemene town are the source population.

4.3.2. STUDY POPULATION

All clients fulfilling the eligibility criteria for reproductive health service during data collection period are study population.

Inclusion criteria

Clients of Reproductive age group (15-49) coming for any type of reproductive health services during data collection period was included

Exclusion criteria

Individuals unable to communicate, unwilling to respond during data collection period was excluded from the study

4.4. SAMPLE SIZE AND SAMPLING TECHNIQUE

4.4.1 SAMPLE SIZE

Sample size was determined by using a single population proportion formula using the following assumptions: prevalence rate of abnormal Vaginal discharge (the highest of four syndromes) 38 % (49) with 5% marginal error and 95% confidence interval of certainty (alpha = 0.05). Based on this assumption, a total of 362 samples plus 5% non response rate was included in the study. Total sample size=**380**

$$n = \frac{(Z \alpha/2)^2 (p) (1-q)}{d^2} = 380$$

Where n = sample size

P= an estimated prevalence = 38%

$$q = 1-p$$

d = margin of error i.e. 0.04 = 5%

Z $\alpha/2$ = Confidence interval i.e. 1.96

4.4.2 Sampling technique

Based on monthly client flow to each reproductive health services in the town, systematic sampling technique was employed to select proportionate sample from each health institutions in the Shashemene town was taken based on number of cases. Monthly reproductive health service clients flow counted retrospectively to assign the required sample proportion to each health institution and samples were taken until the required sample size achieved. K value calculated to each health institution based on client flow. Schematic presentation of sampling technique shown as follows.

SAMPLING PROCEDURE

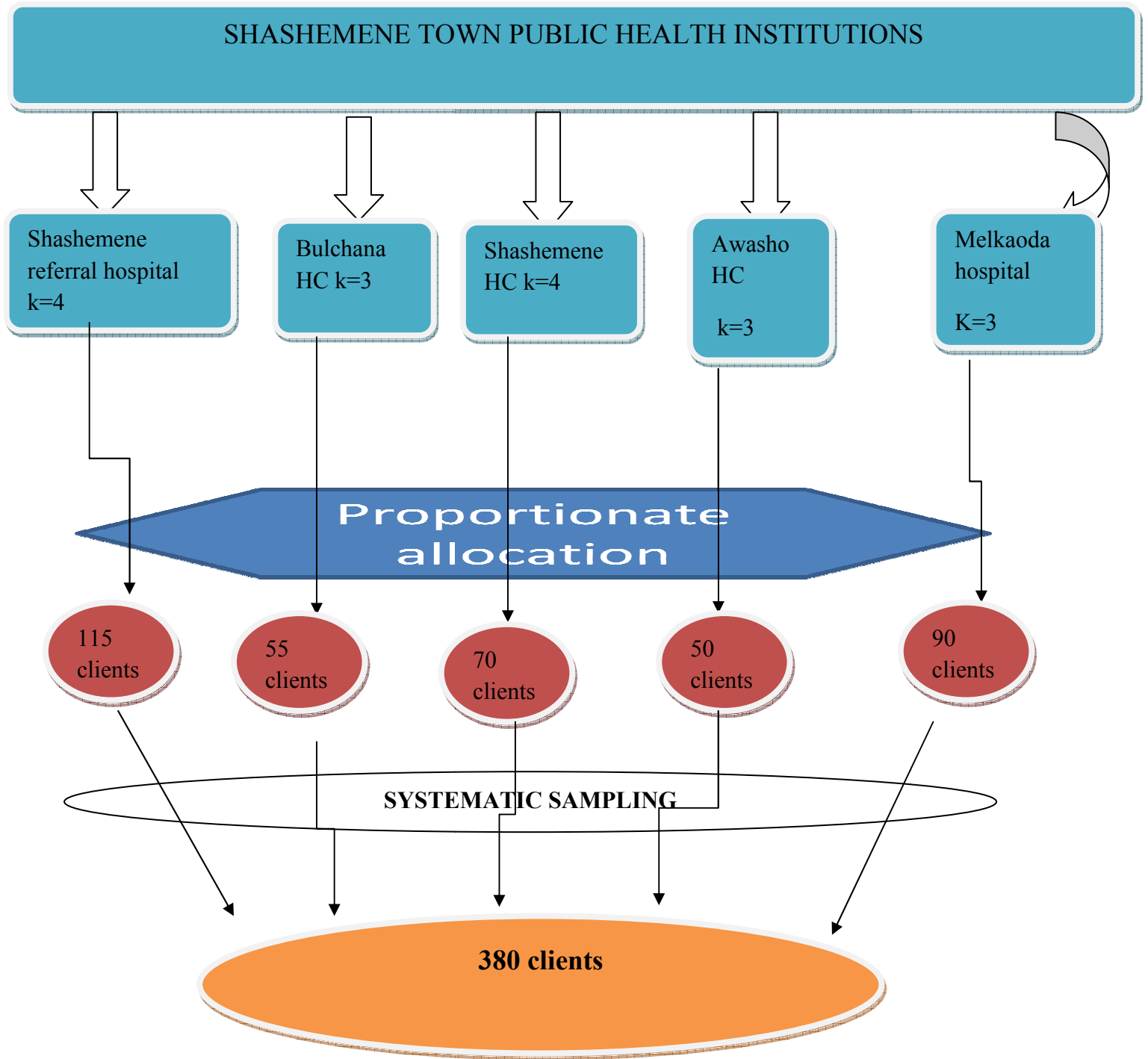


Figure 2: schematic presentation of sampling technique among public health institutions in Shashemene town administrative 2015

4.5. STUDY VARIABLES

4.5.1. Dependent variables

Status of STDs

4.5.2. Independent variables

- Place of residence
- Age
- Sex
- Educational background
- Marital status
- Religion
- Monthly income
- Occupation
- Ethnicity
- Knowledge and Attitude about STDs
- Multiple sexual partners
- History of sexual intercourse with commercial sex workers
- History of sexual intercourse with causal partner
- Sexual intercourse after alcohol intake
- condom utilization
- health seeking behavior
- service satisfaction of clients

4.6. DATA COLLECTION

4.6.1. Data collection instrument

Data was collected by interview structured and pre-tested questionnaire first prepared in English and translated to local language Afan Oromo, For better understanding by the data collectors and respondents. The questionnaire was then back translated to English to check for its consistency. It contains Socio-demographic Characteristics, sexual behavior, Knowledge, Attitude, syndromes of STIs, health seeking behavior questions and Health service assessment adopted from other similar study.

4.6.2. Data collection procedures and technique

Data were collected through structured interviewed questionnaires. The data was collected in collaboration with health professionals working in the selected health institutions and six diploma mid-wife nurses and two supervisors were given orientation about data collection to interview associated factors of STDs by using the questionnaire. Both the data collectors and supervisors were given one days intensive training before the actual work about the aim of study, procedures, and data collection techniques going through the questionnaires question by question, art of interviewing, ways of collecting the data and clarification was given.

4.7 PRE-TEST

Pre-test was carried out in one neutral health institution (Dodola Hospital). Before the beginning of the pre- test its objective and purpose was explained to the health institutions. The pre test aims at improving the structure and content of the questionnaire, evaluating the respondents' reaction, improving the approaches of supervisors to the respondents and determining the average time required to administer one questionnaire.

4.8 Data Quality control

The questionnaire was initially prepared in English and then translated in to Afan Oromo, proper designing was checked for any inconsistencies or distortions in the meaning of words and concepts and pre-testing of the questionnaires in the Dodola Hospital other than the selected health center on 5%(20) of participants, and training was given for the data collectors and supervisors before the actual data collection. Every day after data collection, questionnaires was reviewed and checked for completeness and relevance by the supervisors and principal investigator and the necessary feedback was offered to data collectors prior to start the next morning data collection.

There was discussion with facilitators and supervisors accordingly if there is a problem encounter during data collection. Data quality was also ensured during data coding, cleaning, entry to computer and during analysis.

4.9 Data processing and analysis

The returned questionnaires was checked for completeness, cleaned manually and entered in to Epi info version 5.3.1 statistical software and then transferred to SPSS windows version 16.0 for further analysis. Proportions, means, medians, frequency tables or cross-tabulations of important variables were used for data summarization and presentation. Descriptive statistics were performed and presented by text, tables and graphs. Chi-squared test was used to determine adequacy of the cells and association between independent variables and the outcome. Bivariate logistic regression was done and variables with p-value < 0.25 were selected for next analysis and multicollinearity was checked. Then, multivariable logistic regression analysis was performed to identify factors independently associated with the outcome. Odds ratio was used as measure of strength of

association and p-value less than 0.05 were used as statistical significance. Principal Component analysis (PCA) was used to categorize Satisfaction Variables in to two categories i.e. satisfied and unsatisfied.

4.10 Ethical Consideration

Ethical clearance was obtained from IRB (institutional review board) of Jimma University, College of Public Health and Medical sciences. Then, written consent was obtained from Oromia regional health bureau, Shashemene town administration and Shashemene town Health office and also heads of the hospitals and health centers were communicated through formal letter from town administration in addition to personal communication by the investigator. The objective of the study was explained to the study participants in order to obtain their verbal consent before interview. Participants were also informed that they have full right to discontinue or refuse to participate in the study. Answers to any questions were completely confidential. Respondents were informed on the nature and purpose of the study and were asked if they consent verbally. Confidentiality was reassured and participant was made aware that there would not be any adverse consequence to their refusal to participate.

4.11 Dissemination plan

The study was conducted for the partial fulfillment for the requirement of degree of Masters of public health in Epidemiology at Jimma University Department of Epidemiology and the result of the study was submitted to the department and advisors. The findings of the study were disseminated to relevant organizations and bodies who can make use of the study, including EPHA, MOH, and relevant NGOs. Finally I will try to publish in national and international health journals.

4.12 OPERATIONAL DEFINITION

Multiple sexual partners: More than one sexual partner.

Consistently and Correctly Condom use: Use of a new condom for every act of vaginal sex throughout the entire sex act (from start to finish).

STI: A client has said to be STI he/she fulfills one of the following syndromes:-Urethral discharge, Genital ulcer, Vaginal discharge, Low abdominal pain in women, Inguinal bubo & Scrotal swelling.

Unsafe sex: a susceptible person has sex with at least one partner who has an STI, without taking measures to prevent infection.

Good Knowledge:-an individual (respondent) who respond three and above from the given 5 knowledge measuring items classified as good knowledge.

Poor Knowledge: - an individual who respond below three items from knowledge measuring classified as poor knowledge

Favorable attitude: for positive statement those who choose 'yes' while for negative statement those who choose 'no' for each questions. It mean of the correct answers for attitude questions above mean score, when 1 is given for correct answer and 0 is given for incorrect answer.

Unfavorable attitude: for positive statement those who choose 'no' while for negative statement those who choose 'yes'. It mean of the correct answers for attitude questions below mean score, when 1 is given for correct answer and 0 is given for incorrect answer

Measurement

Knowledge The magnitude of knowledge was estimated by preparing 5 item questions which contains question about STIs mode of transmission, complications and prevention and control. If attendants who answered at least three (60%) items question correctly, he/she was considered as having good knowledge otherwise she is considered as having poor knowledge.

Service satisfaction: Health facility performance in organizing and providing Reproductive health services addressing RH needs and responsiveness of the health facility to health needs of attendants. (Stekelenburg et al. 2004; Claeson et al. 2001) and were measured by 12 items questions. Each item was scored on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) which yields a score range of 12-60. The items in this scale includes: waiting time, comfort of delivery rooms, opening time, staff attitude, system of payment, privacy from having others see the examination etc. In this study, factor score of the satisfaction scale was used to measure the level of attendant's satisfaction.

CHAPTER 5:-RESULTS

5.1 Socio-demographic characteristic of study subjects

All of the recruited samples (380) were included in the study of whom, 88(23.2%) were male and 292(76.8%) were Females. While 107 (28.3%) were orthodox Christian and 157(41.3%) Muslim by religion, significant proportion of the study subjects were urban (250) residents. Speaking of marital status, 303(79.7) were married and majority 243 (63.9) of the study amplest were Oromo in ethnicity. The mean age of study participants were $20.7 \pm (1.9)$. (Table-1)

Table 1: socio-demographic characteristics of study participants attending reproductive health services in Shashemene public health institutions 2015

VARIABLE		Frequency	Percent	STI No. (%)
Residence	Urban	250	65.8	82(66.7)
	Rural	130	34.2	41(33.3)
Sex	male	88	23.2	32(26.0)
	female	292	76.8	91(74.0)
Age category	15-24	140	36.8	24(19.5)
	25-34	214	56.3	88(71.5)
	>=35	26	6.8	11(8.9)
	Total	380	100.0	123(100.0)
Occupation of client	Employed	78	20.5	25(20.3)
	House wife	187	49.2	63(51.2)
	Student	58	15.3	12(9.8)
	merchant	57	15.0	23(18.7)
Marital status	single	43	11.0	11(8.9)
	married	303	79.4	102(82.9)
	divorced	32	8.4	9(7.3)

Educational status	widowed	2	.5	1(.8)
	illiterate	33	8.7	16(13.0)
	Read and write	64	16.8	30(24.4)
	Primary	52	13.7	18(14.6)
	Secondary	128	33.7	38(30.9)
	Diploma	71	18.7	11(8.9)
	Degree and above	32	8.4	3(2.4)
	Total		380	123(100.0)
Husband's occupation	employed	88	27.6	22(21.8)
	merchant	107	33.5	39(38.6)
	Daily laborer	41	12.9	13(12.9)
	farmer	74	23.2	24(23.8)
	others	9	2.8	3(3.0)
	Total	319	100.0	101(100.0)
	Monthly income(ETB)	0-150	5	1.8
151-650		54	19.1	13(14.0)
651-1400		90	31.8	24(25.8)
1401-2350		67	23.7	28(30.1)
2351-3550		55	19.4	21(22.6)
3551-5000		12	4.2	7(7.5)

	Total	283	100.0	93(100)
Ethnicity	Oromo	243	63.9	
	Hadiya	23	6.1	
	Amhara	54	14.2	
	Tigre	8	2.1	
	Wolyta	42	11.1	
	Others	10	2.6	
Religion	Orthodox	107	28.3	
	Protestant	92	24.2	
	Muslim	157	41.3	
	Catholic	22	5.8	
	Others	2	.5	

5.2 Prevalence of STDs

Reported Prevalence of ever had STDs shows 32.4% in the study population and 96(25.3%) had STDs in the last 12 months prior to the data collection period. Among ever had reported prevalence of STDs female accounts major part, 74%. The most frequent chief complaints were vaginal discharge (70.7%) in females, and urethral discharge (59.4%) in males.

Table 2 Occurrence of the different STDs syndromes among individuals aged 15-49 attending RH services in Shashemene tow administrative 2015

Variables		Number (%)
Ever had Sexually Transmitted Diseases(n=123)	Yes	123(32.4)
	No	257(67.6)
STDs during the past 12 months(n=96)	yes	96(25.3)
	No	28(74.7)
STDs during the past 6 months(n=40)	Yes	40(10.5)
	No	83(89.5)
STD syndromes by male during the last 12 months(32)	Genital ulcer	8(25)
	Urethral discharge	19(59.4)
	Scrotal swelling	5(15.6)
STDs Syndromes by females During the past 12 months(n=91)	Vaginal discharge	65(70.7)
	Genital ulcer/sores	6(6.5)
	Lower abdominal pain	21(22.8)

5.3 Knowledge of Study Subjects about STDs

This study has assessed also the level of knowledge of participants about STIs. The overall knowledge on STDs, ninety four (25.7.0%) had good knowledge and the rest had poor knowledge. The scores for each of the knowledge questions are described in the table bellow (Table-3)

Table 3: scores of knowledge questions Shashemene town 2015

variable	score	Number	Percent
Have you ever heard of STDs	Yes	376	98.9
	No	4	1.1
Can people protected from getting STD	Yes	254	66.8
	No	82	21.6
	I don't know	44	11.6
Can STDs transmitted from asymptomatic patients	Yes	130	34.2
	No	146	38.4
	I don't know	104	27.3
Uncircumcised male more risky than circumcised males?	Yes	71	18.7
	No	77	20.3
	I don't know	228	60.0
Is early Rx beneficial to STDs?	Yes	178	46.8
	No	121	31.8
	Don't know	55	14.5
Can people who have STDs develop	Yes	153	40.3

additional complications?	You	95	25
	I don't know	128	33.7
Is there Rx available for STDs?	Yes	297	33.6
	No	109	28.7
	Don't know	67	17.6

Most of the attendants mentioned they have got information from Health institutions 207(55.1%) followed by media 106(28.2%) about STIs were shown in Fig below.

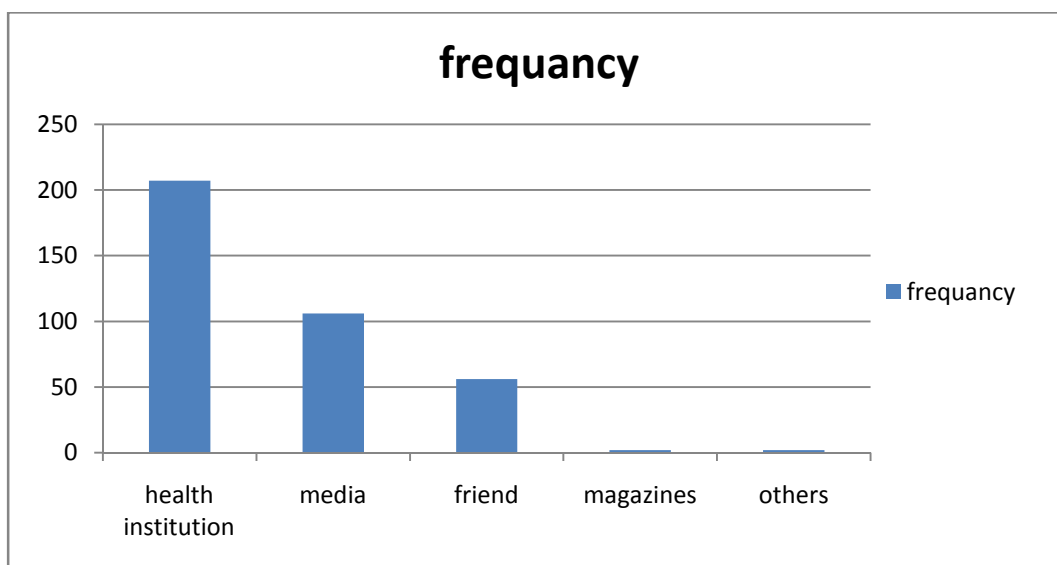


Figure 3: source of information for participants attending RH services in Shashemene town 2015

This study also assessed attitude of clients attending public health services, where about 41% have favorable attitude in the Shashemene town which was described in the table below

Table 4 Attitude of attendants in Shashemene town public health institutions 2015

Variable	Frequency	Percent
favorable	157	41.3
Unfavorable	223	58.7
Total	380	100.00

The health service related factors were measured by PCA (principal component analysis). Six items were left in the rotated complex matrix from 12 items entered in to factor analysis. The rest 6 items treated as independent variables from which only privacy during examination was significant. Concerning the overall assessment of satisfaction on RH service utilization, 202(53.2%) of the clients reported to be satisfied with the service.

Table 5: satisfaction level of attendants of RH services in Shashemene town 2015

Variable	Frequency	Percent
Unsatisfied	188	49.5
satisfied	192	50.5
Total	380	100.0

Among the reported health institutions preferred for medical consultation, hospital accounts the highest 334(87.8%), HC accounts 273(71.8), the rest ones were private clinic 184; Marie-stops 45 and Health post 21 clients.

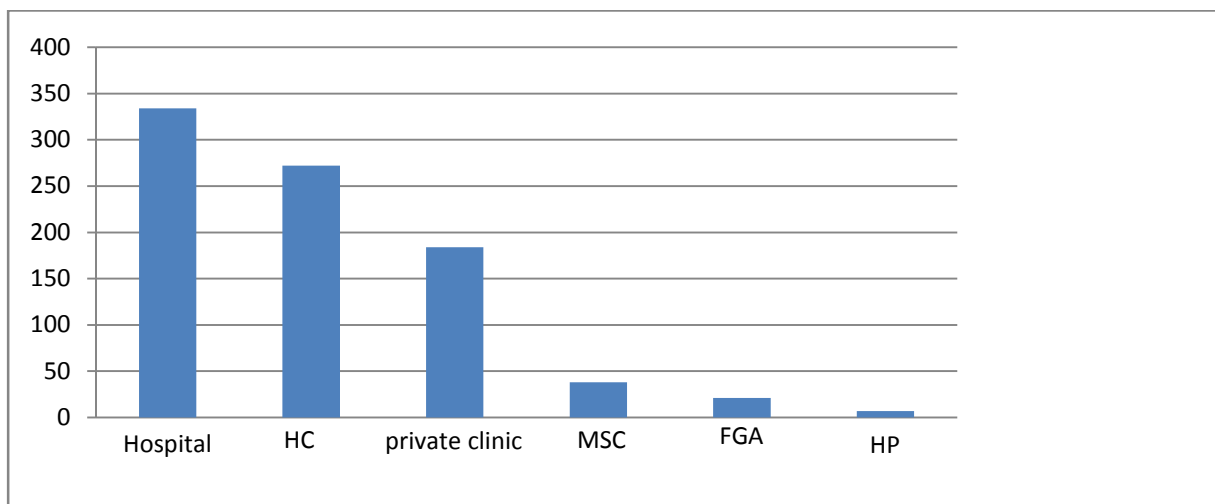


Figure 4: Distribution of preferred health institutions for medical consultation of STDs by Shashemene town administrative 2015

5.4 SEXUAL BEHAVIORS

Amongst reported, more females (77.6%) had reported to ever have sexual intercourse experience than males (22.2 %) and 358(96.5%) clients had history of sexual practice in the last 12 months. The mean age at first sexual intercourse was 18.4±(2.6) years. Though 151 (40.7%) of study subjects reported ever use of condom, consistent use of condom was reported only by 11(11.0%). Twenty two (5.9%) of study subjects reported to

have sex with casual sexual partner and 10(2.7%) had history of sexual practice with commercial sex workers in the last 12 months. Among those who were sexually active, 170 (45.8%) reported to have multiple sexual partners in their life, with mean number of sexual partners being 1.6 which is a bit higher in males 3.0 than females 1.5. while assessing their recent sexual activity, 20 (5.5%) reported to have multiple sexual partners in the previous year before survey. The proportion of urban 133(65.3 %) Clients to start sexual intercourse earlier (<18 years) was higher when compared with rural 70(34.5%).From the total who reported to have sexual intercourse after taking alcohol 31(8.4%), 19(61.3%) of them used condom and about 39% not used condom. The most important reasons for not using condom were mentioned in table below.

Respondents reported several reasons that affect them to use condom consistently. Among those reasons partner refuse condom 80(21.1), trust my partner 73(19.2), dislike condom 55(14.5), condom reduce sexual pleasure 54(14.2) love of my partner 43(11.3) (table 6)

Table 6: reasons for not using condom among RH services attending in Shashemene town administrative 2015

Reasons	Number	Percent
Condom not available	31	8.2
Dislike condom	55	14.5
Partner refuse condom	80	21.1
Trust on my partner	73	19.2
Condom reduce sexual pleasure	54	14.2
Condoms are expensive	1	.3
Love of my partner	43	11.3
others	18	4.9

Table 7: sexual behaviors of study subjects attending RH health services in Shashemene town 2015

Variables		Number (percent)
Sexual experience(n=371)	yes	371(97.6)
	no	9(2.4)
The last 12 months history of sexual practice (n=371)	yes	358(96.5)
	no	13(3.5)
Ever used condom in their life time (n=371)	yes	151(40.7)
	no	220(59.3)
Condom use in the last 12 months (n=155)	yes	97(62.6)
	no	58(37.4)
Frequency of condom use (n=101)	sometimes	59(58.4)
	Most of the time	31(30.7)
	always	11(10.9)
Life time number of sexual partners(n=371)	Only one	200(53.9)
	>=2	170(45.8)
number of sexual partners in the last 12 months (n=365)	one	345(94.5)
	>=2	20(5.5)
Had sex with causal sexual partner in the last 12 months (n=121)	Yes	22(5.9)
	no	349(94.1)
Had sex with sex workers in the last 12 months(n=121)	yes	10(2.7)
	no	361(97.3)
Sex after alcohol use in the last12 months(n=120)	yes	31(8.4)
	no	340(91.6)

Condom use after having alcohol (n=34)	yes	19(61.3)
	no	12(38.7)

5.5 Health Seeking Behaviors

Amongst those who had history of STDs, 94(80%) had got treatments for the most recent syndrome they had. Majority of the participants 71 (56.4%) went to hospital seeking treatment of STIs followed by Health Center (20.4%), private clinic 24 (18.1%) and traditional healer 3(2.2%) See Fig 2 below

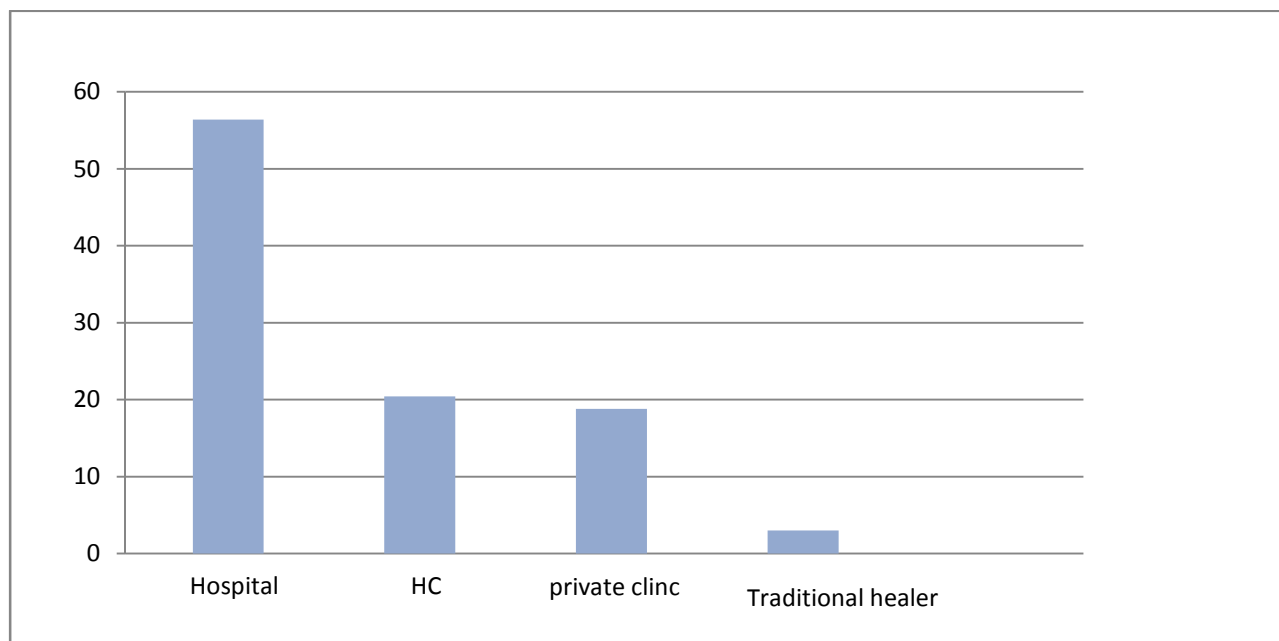


Figure 5: place of treatment for clients attending RH services in Shashemene town administrative 2015

Thirty four (27.6%) study subjects had not got treatments for the recent syndrome they had. The most important reasons for not receiving treatment by study subjects were shown in the figure bellow.

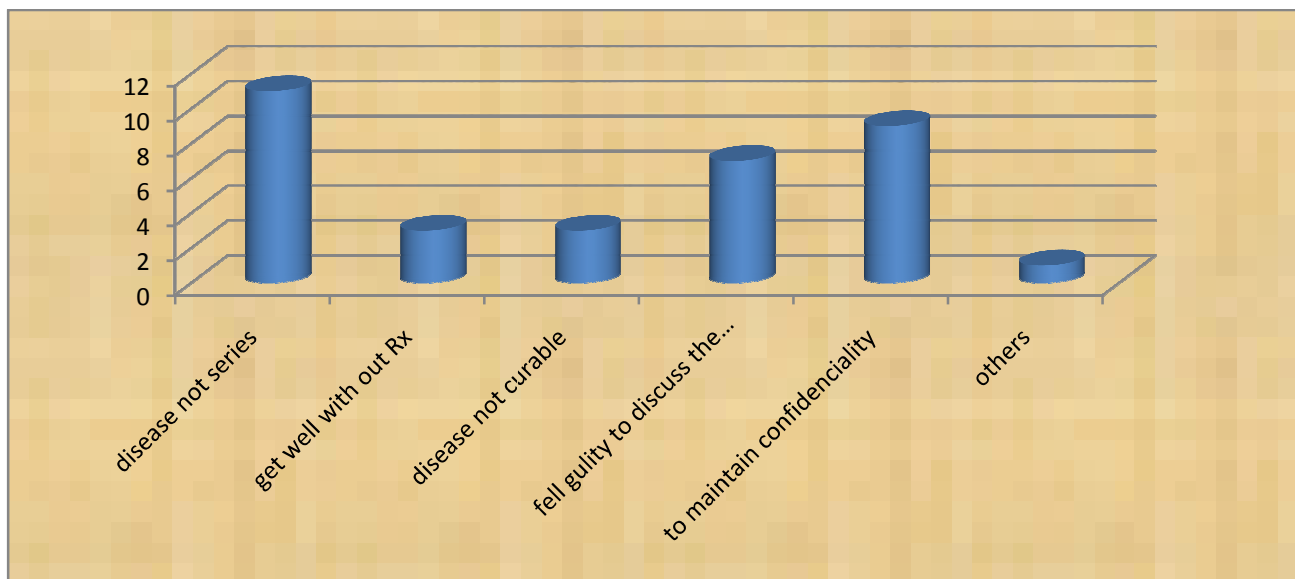


Figure 6: reasons for delayed or never sought treatment for STDs among attendants

5.6 Factors associated with acquiring sexually transmitted infections

Bivariate logistic regression was done and variables with p-value < 0.25 were selected for the multiple logistic regression analysis and multicollinearity was checked by looking at VIF (variance inflesion factor) in the linear regression model. In the bivariate analysis it was found from Socio demographic variables:- age category, Ethnicity, monthly income had statistically significant associations with acquiring STI(p value <0.25); From sexual behavior variables ever use of condom during intercourse, sexual practice with causal partner, sexual practice with commercial sex worker, having had sex after taking alcohol, having multiple sexual partner in their life time, having multiple sexual partner in the last 12 months,12 months condom utilization, age at 1st sexual intercourse, condom utilization after alcohol intake and privacy during examination were significantly associated with STIs. The result of the final multiple logistic regression models are found in the table bellow (table-8).

Table 8: Result of multiple logistic regressions on predictors of acquiring STDs among clients attending RH services in Shashemene town public health facilities, 2015

variables		Status of STIs		Crude OR	Adjusted OR
		yes	no	(95 %CI)	(95%CI)
Age category	15-24	24(19.5)	116(45.1)	3.38(2.03,5.66)	*2.84(1.62,4.96)
	25-34	88(71.5)	126(49.0)	4.8(1.53,9.34)	*3.95(1.49,10.5)
	>=35	11(8.9)	14(5.4)	1	1
Monthly income	Low income	134(47.3)	149(52.7)	2.21(1.321,3.695)	1.86(1.09,3.16)
	High income	149(52.7)	134(47.3)	1	1
number of sexual partner	single	46(37.4)	154(62.3)	1	1
	multiple	77(62.6)	93(37.7)	2.63(1.695,4.091)	*2.34(1.36,4.0)
Had intercourse with commercial sexual worker	yes	8(80)	2(20)	8.56(1.789,40.932)	7.43(1.55,35.6)
	no	115(31.8)	246(68.2)	1	1
Had intercourse with casual sexual partner	yes	12(54.5)	10(44.5)	2.57(1.079,6.138)	1.87(0.77,4.7)
	no	111(31.8)	238(68.2)	1	1
Had intercourse after having alcohol	yes	23(74.1)	8(25.9)	6.9(2.986,15.945)	*3.45(1.3,10.0)
	no	100(29.4)	240(70.6)	1	1

Ever had condom utilization	yes	60(39.7)	91(60.3)	1.64(1.061,2.546)	1.12(0.69,1.8)
	no	63(40.1)	(59.9)	1	1
Condom utilization after having alcohol	yes	17(89.4)	2(10.6)	8.5(1.335,54.127)	3.87(1.19,9.96)
	no	6(50)	6(50)	1	1
Number of sexual partner in the last 12 months	single	109(31.6)	236(68.4)	1	1
	multiple	14(70)	6(30)	5.05(1.89,13.5)	*3.67(1.01,13.3)
Age at first sexual intercourse	<18	73	130	3.01(.49,4.18)	*2.88(1.5,5.6)
	>=18	50	114	1	1

* Significantly associated variables in multivariate logistic regression analysis.

CHAPTER SIX - DISSCUSSION

STDs are a major public health problem in most African countries on account of their frequency, their associated morbidity and mortality, their impact on maternal and infant health, as well as their economic costs in terms of health expenditure and lost productivity and last but not least because of their social consequences. Nearly 25% of participants reported to have STDs in the last 12 months prior to this study. Add summary of the independently associated factors

As per to this study, among 371 sexually active clients, 123(33.2%) ever had STDs and 96(25.3%) had STDs in the past 12 months prior to the study period clients attending reproductive health services in the study area relatively lower when compared with the study done in Nigeria fifty five percent (55%) of the subjects harbored various agents of STDs and Up to 50% of pregnant women have been found to have vaginal discharge in sub-Saharan Africa (49). This difference might be due to study in Nigeria included screening of all attendants by microbiologic lab investigation and included asymptomatic patients. And a study done in Zimbabwe showed that the prevalence of common sexually transmitted diseases was also 20% among women attending MCH/FP clinics. Even though this disease condition poses serious burden to the public indefinitely, the healthcare system has been almost exclusively ignored for years except HIV/AIDS, particularly in resource poor countries like Ethiopia.

Possible predictors such as socio demographic (ethnicity, monthly income and age category) and behavioral (sexual behaviors on STD) were associated with sexually transmitted infections among clients attending reproductive health services. This study investigated also the participant's knowledge on the various transmissions, preventive, and curative measures of STDs. Seventy seven percent of attendants had poor knowledge on STDs. This study was in line with the study done in Gondar Town, Knowledge about STD was low,39%. Additionally this is consistent with the 2005 DHS in Egypt revealed that only 18.0% of married women aged 15 to 24 had heard of STIs and knowledge was very poor (51). This might be unreasonable disparity when compared to current interventions on HIV and reproductive health in young people. The fact that more emphasis was given for the prevention and control of HIV may have masked people to know and prevent themselves from other STDs.

Consistent condom use 295 (77.6%), being faithful, 311 (81.8%) and abstinence, 197 (51.8%) were reported to be the main preventive measures against STDs. the result shows relatively higher protective measures taken when compared with the study conducted in wolyita university students, thus Consistent condom use, 60.7%; being faithful, 66.4%; and abstaining, 62.5%. This slight difference might be due to difference between study populations, difference in marital status and characteristics. This indicates great majority of attendants had good

access to condom, transmission and method of protection. Also condom promotion and health education promotion activities become improved.

While assessing the sexual behavior of the participants, it was identified that 97% (21.8% male and 75.8% female) of the attendants were sexually active, of whom 77.7% (21 % male and 75.5% female) were sexually active 12 months prior to the survey. In this study females were highly sexually active than males. This study was inconsistent with the study done high school students of Ethiopia, 29.1% of study population were sexually active of whom males accounts 66.2% and study done Agaro high school, males accounts 32.6% and the males are highly sexually active than females, the difference might be due to, in this study high proportion of attendants were married.

Findings of this study also show that the highest rate of STDs among 25–34 years of age females (81.1%) and 35 to 44 age group of males (35.8%). This result consistent with the study done in Addis Ababa, found the highest rate of STDs among 25–34 years of age females and 35 to 44 age group of males. This implies the prevalence of STIs increased with increasing of age.

STDs affected clients in the study population, the most frequent chief complaints were vaginal discharge (70.7%), and urethral discharge (59.4%), Almost these were two times higher than the study done in Addis Ababa, the most frequent chief complaints were vaginal discharge (38.38%), combination of the sign and symptoms (28.7%) and urethral discharge (13.58%).(49) The possible reason for this difference might be due to difference in study population, the study area of this research serves as route for commercial center for south Ethiopia, rapidly expanding town and high traffic flow that crosses over the town.

The fact is that risky sexual behaviors like having multiple sexual partners, having had sex with commercial sex worker and casual partners among the attendants especially females is common because their culture, religion and adult age and socioeconomic independency and environment. In this study sexual intercourse after having alcohol, life time number of sexual partners, age category found to have associated with sexually transmitted diseases. A multiple logistic regression analysis identified different independent predictors (life time number of sexual partners, sexual partners in the last 12months, age at first sexual intercourse, age category and sexual intercourse after having alcohol) and from health related factors privacy during examination associated significantly for acquiring STDs in the study population.

Amongst health seeking behavior, 34(27.6%) study subjects had not got treatments for the recent syndrome they had. The most important reasons for not receiving treatment by study subjects were feeling guilty of telling problem to a health worker, 7(20.6%); thinking symptom as incurable,3(8.8%); thinking Symptom not serious 11(32.3%), thinking symptom as curable without treatment, 3(8.8%); to maintain confidentiality 9(26.5%), and

others including lack of time, 1(3%). Significant number of study subjects did not get treatment; this indicates great majority of attendants had poor awareness about the problem and its treatment. This once again can be taken as informative disparity provided the service is available and that they are thought to have access.

In this study 45.9% of study subjects reported to have multiple sexual partners in their life and of the sexually active study subjects in the previous year before the survey, about 6% had reported to have sex with casual sexual partners, 10% had reported to have sex with commercial sex workers. This is inconsistent with the study done in wolyta university, 26.3 % of study subjects reported to have multiple sexual partners in their life, 14.8% had reported to have sex with casual sexual partners and 9.8% had reported to have sex with commercial sex workers. This disparity might be due to difference in study population characteristics; students may not have adequate or consistent income, and are living without consistent adult supervision.

Result of this study shows that clients who had sexual intercourse after alcoholic intake were about 3 (AOR (95%CI: 3.45(1.95, 9.96.1) times more likely to have sexually transmitted diseases than those have intercourse after didn't alcoholic intake. This was nearly similar to the study done in Ethiopia on Female sex workers, alcohol use on a daily basis were found to have a two-fold increased risk of having sexually transmitted diseases (STDs) compared to the non-users of alcohol: AOR (95% CI) = 2.50 (1.35, 4.64) (60), and with study done in SNNP Ethiopia (AOR=2.05; 95% CI: 1.07, 3.94). (64). It is found that sexual intercourse after alcohol intake was one the risk factor for acquiring STDs. The possible reason might be individuals taking alcohol exposed to unprotected sex and acquire STDs.

Respondents who had multiple numbers of sexual partners were about three times more likely to have sexually transmitted diseases than those who had single sexual partner. The total lifetime number of sexual partners was significantly associated with contracting STDs. This study finding is consistent with study done in Benin City, Nigeria; AOR 95 % CI 2.9(1.92, 4.97) which shows increasing sexual partners increases the risk of contracting STDs (61) Also study in Gondar town, North West Ethiopia history of multiple sexual partners (AOR= 3.0; 95% CI 1.9- 8.4) were significantly association with sexual transmitted infection. The possible reason for this finding might be multiple sexual intercourse with different individuals increased acquiring STDs (36).

In this study, condom utilization among sexually active clients was 40.7%, which is consistent with studies done among Addis Ababa youth (16-48%), and also consistent with study done among young adults in Dessie (56.8%)(62).The might be due to practice of condom utilization not consistent in general population. This implies majority of attendants are married and married individuals scare to use condom each sexual activity as well as married individuals have low perceived risk of acquiring STDs.

The mean age at first sex was 18.4 ± 2.6 and 56% of the participants had their first sex at age <18. This result is inconsistent with the study done in china, the mean age 23.6 years (± 2.9 years), and 16% of the attendants

had their first sex at age <20 years (65). The possible reason might be majority of attendants start sexual intercourse during high school age period. And the mean of the respondents' first sexual intercourse in Madawalabu university students was 18.3 (± 2.18) years, students of Wolyiata Sodo University – 17.7 (± 4.9) years (65). And which was nearly similar with this study. Clients who had sexual intercourse before the age of 18 were AOR =2.88 (95%CI: 1.5, 5.6) times more likely to have sexually transmitted infections than those have intercourse after age 18 years. This study was in line with the study done in Dessie AOR= 2.82 (95% CI: 1.95, 4.08). The possible reason for this might be less family connectedness as measured by less caring attitude and less parent child communication about the risk factors of early sexual initiation during adolescent age, was an independent predictor of acquiring STIs. This study might be affected by Recall and Social desirability bias hence the issue is sensitive.

CHAPTER 7

CONCLUSION AND RECOMMENDATION

7.1 CONCLUSIONS

This study shows that attendants reported significant proportion of syndromes of STDs and high percentage of risky sexual behaviors. The prevalence of STDs was high among youths and urban residents. Knowledge of STDs and treatment seeking behavior were very low among clients attending the services with irregular and inconsistent condom usage was bold. .

- Sexual behavioral Factors, including having multiple sexual partners, age at first sexual intercourse, and sexual intercourse after taking alcohol and number of sexual intercourse in the last 12 months were significantly associated with STDs.
- The prevalence of early sexual initiation (<18 years of age) was high and Misconceptions about mode of transmissions were one the findings of this research

7.2 RECOMMENDATIONS

- Therefore, strengthening of the existing reproductive health services and integrating STDs cause identification and treatment with all service of the health care units.MOH should establish possible modalities that can reinforce their treatment seeking behavior, minimizing the risk of acquiring STDs.
- Making STDs service more accessible, lowering their cost, promoting them extensively, and helping to overcome social and personal obstacles that limit their use.
- Strengthening of Awareness creation activities to increase knowledge of individuals on STIs should be advanced by all responsible body.
- Health office at all level should work in collaboration to all responsible body to delay early sexual initiation of clients to prevent and control of STDs.
- Strengthening of Implementation of RH services for different age groups at different stages by MOH, NGO's.
- Every STD consultation is an opportunity for preventive education including lowering the number of sexual partners, the lower the risk of STD.
- MOH and Donors should work and strengthened Condom promotion.
- Social mobilization should be planned and implemented on misconceptions of STDs mode of transmission and prevention methods.

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Annex-I Questionnaire

JIMMA UNIVERSITY

COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCES

Questionnaire prepared to collect data on magnitude of Sexually Transmitted Infections (STIs) and associated factors among Clients attending Public health institutions in Shashemene town

Dear

In ensuring the health of Reproductive age groups; understanding of existing problems and related factors of this group of population is important. In line with this, a study is proposed to assess the **magnitude of Sexually Transmitted Infections (STIs) and associated factors among Clients attending Public health institutions** and you are chosen to participate in this study. The choice was made by chance (at random). The study will involve various intimate and private life questions. Here is a questionnaire for you to be completed. There is no need to be asked your name and no individual responses will be reported so that your responses will be kept confidentially and the investigators are fully responsible for all the questions you have. It is your full right not to participate in the study. In order to attain the goal; we are asking for your help so that your participation is very important for the success of the survey.

Do you wish to participate in the study? Yes, please continue No, ve

Interview Questionnaire to be filled by data collectors for Clients attending public health institutions 2015

I. Socio-demographic Characteristics

No	Question	Responses	Skip
101	Place of residence	urban-----1 rural-----2	
102	Sex	Male-----1 Female-----2	
103	occupation	1 employed-----1 2 house wife-----2 3.studenet-----3 4.merchant-----4	
104	Age in years	-----year	
	income	ETB/month	
105	Religion	Orthodox -----1 Protestant-----2 Islam-----3 Catholic -----4 Others/specify-----88	
106	Marital status	Single -----1 Married &live together-----2 Married but not live together-----3 Divorced -----4	

106	Place of home town residence	Rural-----1 Urban-----2	
102	Highest grade completed	1. Illiterate 2. Read and write 3. Primary 4. Secondary 5. Diploma 6. Others (specify)_____	
104	Ethnicity	Oromo-----1 Hadiya_____2 Amhara-----3 Tigre-----4 Wolyiata-----5 Other, specify-----97	
108	husband's Occupation	employed-----1 merchant -----2 Daily laborer----3 Farmer_____4 Other specify.....97	

II. Sexual Behaviors

No	Question	Responses	Skip
107	Have you ever had sexual intercourse?	Yes-----1 No-----2 →	121
108	How old were you when you started first sexual intercourse?	Age in years _____	
109	Have you ever had sexual intercourse in the last 12 months?	Yes-----1 No-----2	
110	Do you have sexual partner currently?	Yes, regular sexual partner-----1 Yes, casual sexual partner-----2 No-----3	
111	How many different sexual partners did you have in your life time?	Number _____	
112	How many different sexual partners did you have in the last 12 months?	Number _____	
113	Have you ever used condom during intercourse?	Yes-----1 No-----2 →	116
114	Have you used condom during intercourse in the last 12 months?	Yes-----1 No-----2 →	116
115	How frequently were you using condom during intercourse in the last 12 months?	Some times -----1 Most of the time-----2 Always-----3	
116	If response to Q. 113 or 114 is No , what were your reasons for not using condoms during intercourse?	Condom not available-----1 I dislike condoms-----2 My partner refused it-----3 I have trust on my partner-----4 Condom reduces sexual pleasure-----5 Condoms may have virus-----6 Condoms are expensive-----7 I am in love with my partner-----8 Others/specify-----88	
117	Have you ever had sexual intercourse in the last 12 months with persons you have known for less than three weeks?	Yes-----1 No-----2	

118	Have you ever had sexual intercourse in the last 12 months with commercial sex workers or person who did have presumed sexual intercourse with commercial sex workers?	Yes-----1 No-----2	
119	Have you ever had sex after having alcohol?	Yes-----1 No-----2 →	121
120	If response to Q. 121 is yes , did you use Condom?	Yes-----1 No-----2	

III. Knowledge on Sexually Transmitted diseases (STDs)

No	Question	Responses	Skip
121	Have you ever heard of Sexually Transmitted diseases	Yes-----1 No-----2 →	133
122	If response to Q. 121 is yes , Source of information	Health institution-----1 magazine-----2 Friend-----3 Media-----4 Other/specify-----88	
123	How can people get infected with Sexually Transmitted diseases?	By having unprotected sex -----1 By facing sun while urinating-----2 By facing moon while urinating-----3 By urinating at a place where a dog has urinated-----4 By urinating on hot places-----5 By magic-----6 Others(specify)-----88 Don't know-----99	
124	Can people get protected from Getting infected with sexually transmitted diseases?	Yes-----1 No-----2 →	126
125	How can people get protected from getting infected with any of the sexually transmitted infections? (multiple response possible)	By using condom every time during sex---1 By having only one faithful sex partner----2 By abstaining from sexual intercourse-----3 By using contraceptive pills-----4 Withdrawal-----5 Injectables-----6 Others (specify)-----88 Don't know-----99	

126	Can a person catch STIs from someone who doesn't show any of the symptoms of STIs?	Yes-----1 No-----2 Don't know-----99	
127	Are uncircumcised males more exposed to STIs than circumcised ones?	Yes-----1 No-----2 Don't know-----99	
128	Is an early treatment beneficial for people infected with any of the STIs?	Yes-----1 No-----2 Don't know-----99	→130 →130
129	If response to Q. 128 is “No” What is the most important reason for preferring to remain untreated for the STI You mentioned above? Circle only one reason.	Disease is not serious-----1 Get well from disease without treatment-----2 Disease is not curable-----3 No effective treatment is available-----4 Cost is expensive-----5 Feel guilty discussing my problem-----6 Attitude of health professionals is low---7 To maintain confidentiality-----8 Others/specify-----88	
130	Can people infected with STDs develop additional health problems (complications) unless they get early treatments?	Yes-----1 No-----2 Don't know-----99	}→132
131	What additional health problems (Complications) can people that do not get early treatments for STDs can Develop?	List:	
132	Is there a treatment for sexually transmitted diseases (STDs)?	Yes-----1 No-----2 Don't know-----99	→134 →134
133	In which of the following health institutions are STD treatments available? (More than one response is possible).	Hospital-----1 Health center-----2 Student clinic-----3 Marie stops clinic-----4 Family guidance association (youth center)-----5 Private clinic-----6 Others/specify-----88	

IV. Syndromes

No	Question	Responses	Skip
----	----------	-----------	------

134	Have you ever had Sexually Transmitted infections	Yes-----1 No-----2 →	End Thank You!
135	Did you have Sexually Transmitted infections during the past 12 months	Yes-----1 No-----2 →	139
136	Did you have Sexually Transmitted infections during in the past 6 months?	Yes-----1 No-----2 →	139
137	For Male Respondents only: During the past 12 months, which of the following symptoms did you have (multiple response possible)	Genital ulcer/sores-----1 Urethral discharge-----2 Scrotal swelling-----3	
138	For female Respondents only: During the past 12 months, which of the following symptoms did you have (multiple response possible)	Vaginal discharge-----1 Genital ulcer/sores-----2 Lower abdominal pain-----3	

V. Health Seeking Behaviors

No	Question	Responses	Skip
139	For the most recent syndrome you had, have you received any treatment?	Yes-----1 No-----2 →	142
140	For the most recent syndrome, Where have you received treatment?	Hospital-----1 Health center-----2 Health post-----3 Marie stops clinic-----4 Family guidance association (youth center)-----5 Private clinic-----6 Traditional healer-----7	

220	Now I am going to ask you some questions about the services you have received during your last treatment (service) taken in past 12 months. I would like to have your honest opinion about the things that we will talk about. This information will help improve services in general.		
220	Now I am going to ask you some questions about the services you have received during your last health service in past 12 months. I would like to have your honest opinion about the things that we will talk about. This information will help improve services in general.		
		Others/specify-----88	
141	How many days' and/months did you have the most recent symptom before you receive the first treatment?	Day/s _____ Month _____ Don't remember----- 99	
142	If response to Q. 139 is no, what is your most important reason for not receiving any Treatment?	Thought symptom is incurable-----1 Symptom not serious-----2 Thought getting well from symptom without Treatment-----3 Don't know where it can be treated--4 No effective treatment is available.---5 Lack of time-----6 Lack of money-----7 Feel guilty telling my problem to a health worker-----8 Others /specify-----88	

VI .Health service delivery quality

		Very dissatisfied	dissatisfied	neutral	satisfied	very y satisfied
01	Time you waited to see a provider	1	2	3	4	5
02	Comfort of service delivery rooms at health facility	1	2	3	4	5
03	System of payments at health facility	1	2	3	4	5
04	Privacy from having others see the examination	1	2	3	4	5
05	Referral service efficiency at health facility	1	2	3	4	5
06	Availability of drugs and equipment at health facility	1	2	3	4	5
07	The hours of service at health facility, i.e., when they open and close	1	2	3	4	5
08	Relationship with health provider	1	2	3	4	5
09	The cleanliness of the health facility	1	2	3	4	5
10	Being treated with respect	1	2	3	4	5
11	Experience of health provider	1	2	3	4	5
12	Attitude of health provider	1	2	3	4	5

VII. Questionnaires to Assess Attitude

1. What do you think about STDs?

It is a disease-----01

It is a curse-----02

Others (specify)_____97

2. Do you think that STDs are more prevalent in the community?

Yes-----1

Don't know-----03

No-----2

3. Do you think that STDs can be transmitted through methods other than sexual Intercourse?

Yes-----01

Don't know -----03

No-----02

4. Do you think that Adolescent are more exposed to STDs?

Yes-----01

Don't know-----03

No-----02

5. Do you think that STDs can be transmitted in homosexuals?

Yes-----01

Don't know-----03

No-----02

6. Do you think that persons with STDs can easily be identified from the community

Yes-----01

Don't know-----03

No-----02

7. Do you think that STDs increase the risk of acquiring HIV/AIDS?

Yes-----01

Don't know -----03

No-----02

8. Do you think that STDs are preventable?

Yes-----01

Don't know-----03

No-----02

9. Do you think that condom prevents STDs ?

Yes-----01

Don't know-----03

No-----02

10. Do you think that health education can reduce transmission of STDs?

Yes-----01

Don't know-----03

No-----02

11. Do you think that having single partner can prevent STDs?

Yes-----01

Don't Know----03

No-----02

12. Do you think that persons who have got STDs can go to health institution for treatment?

Yes-----01

Don't know-----03

No-----02

13. Do you think that STDs can cause social stigma and discrimination?

Yes-----01

Don't know-----03

No-----02

Thank you very much!

Annex II: Afan Oromo version questionnaires.

Yuunivarsiitii Jimmaatti Faakaalitii Saayinsii Fayyaa Hawaasaa Fi Meedikaalaa, Qorannaa

“Magnitude of sexually transmitted diseases and associated factors among clients attending Public health institutions in Shashemene town, west Ethiopia”

Waraqaa Gaaffii

Waraqaan gaaffii kun kan qophaa’e raga “Magnitude of sexually transmitted diseases and associated factors among clients attending public health institutions in Shashemene town Naannoo Oromiyaa west Ethiopia”

Walii galtee

Nagaa

Seensa;

Maqaan koo _____ jedhamu kan hojjachaa jiru ragaa qorannaa Yuunivarsiitii Jimmaa, faakalittii saayinsii fayyaa hawaasaa fi Meedikaalaa waliin ta’uun mata duree **“magnitude of sexually transmitted diseases and associated factors among clients attending public health institutions in Shashemene town west Ethiopia”** irratti gaggeeffamuuf oolu funanuu dha. Maqaan keessan guca kana irrattii hin-barreeffamu, akkasumas ragaa naa keennitan walin qabsifamees itti hin-fayyadamamu. Gaaffiin isin deebisuu hin-barbaadne yoo jiraate dhiisuun mirga keessan ta’ee yeroo barbaaddanis gaaffii fi deebii gaggeessinu dhaabuu ni-dandeessu. Haa ta’u malee, gaaffilee hundaaf deebiin sirii ta’e kaayyoo qorannaa kanaaf baay’ee barbaachisadha. Hirmaachuudhaaf fedhii qabduu? 1. Eeyyee 2. Hin Qabnu

Gaaffii fi deebii kana xumuruuf sa'aatii _____ ta'u nutti ni fudhata.

Mallattoon gaafataa namni gaafatamu kun waliigaltee isaa jechaan ibsuu isaa mirkaneessuuf _____

001. Lakkoofsa waraqaa gaaffii _____

002. Maqaa nama gaafatuu _____

003. Guyyaa gaaffii fi deebii _____

004. Teessoo; 1. Magaala 2. Baadiyaa

005. Firii: 1. Hundi guutame 2. Walakkaa guutame 97. kan biraa (Ibsi)

To’ataa hordofe; Maqaa _____, Mallattoo _____

I. Haala hawwassummaa fi

101. Bakka jireenyaa

1. magaalaa
2. baadiyyaa

102. Saala

1. Dhiira
2. Dhalaa

103 **Gosa hojii**

1 hojjetaa mootummaa

2 haadha manaa

3. barrataa/ttuu
4. daldaalaa

104. umurii waggaadhaan-----

105. galii ji,aaqarshii Itoopiyaatiin-----

106. Amantii

1. Ortoodoksii
 2. Proteestaantii
 3. Musiliima
 4. Kaatoolikii
88. kan biraa(adda baasii)

107. Haala fuudhaafi eerumaa()

1. kan hin fuunne/hin eerumne
2. kan fuudhe/kan eerumte
3. kan hike/hiikte
4. kan haati mana jala duute/ abbaan mana du'e

108. Haala barumsaa

1. kan hin barranne
2. barreessuu fi dubbissuu danda'udandeessu
3. barumsa sadarkaa tokkoffaa
4. barumisa sadarkaa lammaffaa

5. Dipiloomaa

88.kan biraa(adda baasii)

108. Sanyii

1. Oromoo

2. Hadiyaa

3. Amaaraa

4. Tigree

5. Walaayittaa

88. kan biraa(adda baasii barreessi)

109 Gosa hojii kan abbaa mana/haadha manaa

1. hojjetaa mootummaa

2. daldaalaa

3. hojjetaa guyyaa

4. qotee bulaa/bultuu

88. kan biraa(adda baasii barreessi)

II. Hamala(sexual behavior)

110.kanaan dura walquunnamtii saalaa raawwattee beektaa?

1. eeyyee

2. lakki/gonkumaa

111. umuriin kee waggaa meeqa yeroo jalqaba walquunnamtii saalaa raawwattee?

Umurii waggaadhaan_____

112.Ji'oottan kudha lammaan daraban kana keessatti walquunnamitii saalaarawwattee jirtaa?

1. eeyyee

2. lakki/gonkumaa

113.michuu walquunnamtii saalaa wajjin raawwatu qabdaa?

1. eeyyee, kan yeroo hundumaa waliin raawwannu
2. eeyyee, darbee darbee kan waliin raawwannu
3. lakki hin qabuu

114. umurii kee kana keessatti walquunnamtii saalaa kan wajjin raawwatu meeqa qabda?

1. baayyina lakkoofsaan _____

115. baatii kudha lamman darban kana keessatti walquunnamtii saalaa kan wajjin raawwatu

nama adda addaa meeqa wajjinii?

1. baayyina lakkoofsaan _____

116. yeroo walquunnamtii saalaa raawwatu kondoomii fayyadamtee beektaa?

1. eeyyee
2. lakki

117. baatiiwwan kudha lammaan darban kana keessatti yeroo walquunnamtii saalaa raawwatu

kondoomii fayyadamtee beektaa?

1. eeyyee
2. lakki

118. baatiiwwan kudha lammaan darban kana keessatti yeroo walquunnamtii saalaa raawwatu

kondoomii kan fayyadamtu yeroo akkamii ture ?

1. darbee darbee
2. yeroo baayyee
3. yeroo hundumaa

119. deebi'ii gaaffii . **113 ykn 114** yoo “lakki” ta'e, sababi ati kondomii hin fayyadamneef maal

ture?

1. kondomiitu dhabameetu
2. kondomii fayyadamuu hin jaaladhu
3. hiriya/michuun koo na dinnaanii
4. michuu/hiriya koo waanin amanuuf
5. kondomiin fedhii walquunnamtii saalaa raawwachuu waan gadi buusuuf
6. kondomiin vayiireesii waan qabuuf

- 7. gatiin kondomii mi'aa waan ta'eef
- 8. hiriya/michuu koo waani jaalladhuuf
- 88. kan biraa(adda baasii barreessi)

120. baatiiwwan kudha lammaan darban kana keessatti, nama turban sadii gadi walbeektanuu wajjiin walquunnamtii saalaa raawwattee beektaa?

- 1. eeyyee
- 2. lakkii/gonkumaa

121. baatiiwwan kudha lammaan darban kana keessatti, hojjettuu mana bunaa/hoteelaa wajjin walqunnamtii saalaa raawwattee beektaa ykn nama hojjettuu mana bunaa/hoteelaa wajjin walquunnamtii saalaa raawwatee wajjin walqunnamtii saalaa raawwattee beektaa?

- 1. eeyyee
- 2. lakkii/gonkumaa

122. dhugaatii nama macheessu egga dhugdee booda walquunnamtii saalaa raawwattee beektaa?

- 1. eeyyee
- 2. lakkii/gonkumaa

123. deeb'iin gaaffii . 121 yoo eeyyee ta'e, kondomii fayyadamtee turtee?

- 1. eeyyee
- 2. lakkii/gonkumaa

III. Hubannoo/beekumsa dhukkuboota walquunnamtii saalaatiin dadarbanu irratti

124. waa'ee dhukkuboota walquunnamtii saalaatiin dadarbanu dhageessee beektaa?

- 1. eeyyee
- 2. lakkii/gonkumaa

125. deeb'iin gaaffii . 124 yoo eeyyee ta'e, maddi hodeeffannoo maal ture

- 1. dhaabbilee fayyaa
- 2. barrulee
- 3. hiriya
- 4. Miidiyaa
- 88. kan biraa(adda baasii barreessi)

126. namooti dhukkuboota walquunnamtii saalaatiin dadarbanuun akkamitti qabamu?

1. walqunnamtii saalaa ofi eeggannoo hin qabinne raawwachuudhaan
2. garaa aduutti garagalanii fincaa' uudhaan
3. halkan gara ji'aatti garagalanii fincaa' uudhaan
4. bakka sareen itti fincaa'eetti fincaa' uudhaan
5. bakka ho'aatti fincaa' uudhaan
6. tolchaadhaan(magic)
88. kan biraa(adda baasii barreessi)
99. hin beeku

127. dhukkuboota walquunnamtii saalaatiin dadarbanu irraa ofi eeguun ni danda'amaa?

1. eeyyee
2. lakkii/gonkumaa

128. dhukkuboota walquunnamtii saalaatiin dadarbanu irraa akkamitti ofi eeguun danda'ama?

(multiple response possible)

1. yeroo walquunnamtii saalaa raawwatamu mara kondoomitti fayyadamuudhaan
2. hiriya/michuu wal ammananu tokko qoffaa qabaachuudhaan
3. fuuudhaa fi eeruma dura walquunnamtii saalaa raawwachuu dhiisuudhhaan
4. qorichoota qussannoo maatiidhaaf ta'anutti fayyadamuudhaan
5. Withdrawal
6. marfee warraannachuudhaan
88. kan biraa(adda baasii barreessi)
99. hin beeku

129. namni tokko dhukkuboota walquunnamtii saalaatiin dadarbanu nama mallatoon

dhukkubichaa irratti hin mullanne irraa qabamuu ni danda'a?

1. eeyyee
2. lakkii/gonkumaa
99. hin beeku

130. dhiiroti dhanna hin qabane warra dhanna qabatan caala dhukkuba walquunnamtii saalatiin

darban itti saaxilamaadhaa ?

1. eeyyee
2. lakkii/gonkumaa
99. hin beeku

131.dhukkuba walquunnamtii saalatiin darban kamiyyu yeroodhaan yaaalamuun bu'aa qabaa'ii?

1.eeyyee

2. lakkii/gonkumaa

99. hin beeku

132.deebi'iin gaaffii. **131 yoo “lakki”**ta'e, sababi dhukkuba walquunnamtii saalaatiin dadarban yaalamuu dhiisuu maal ta'a?**deebi'ii tokko qofaatti mari**

1. dhukkubichi cimaa waan hin taaneef

2.yaalumsa malee dhukkubicha irraa waan fooyya'eef

3.dhukkubicha irraa faayyu waan hin danda'amneef

4.yaalumsi ga'aa ta'e waan hin jirreef

5.baasiin yaalumsaa cimaa waan ta'ee

6.rakkoo kana mariisisuuf balleessaa ta'ee waan mullatuuf

7.ilaalchi ogeessota fayaa gadi bu'aa waan ta'eef

8.hicitii eeguudhaaf

88.kan biraa yoo jiraate ibisi

133.namini dhukkuba walquunnamtii saalaatiin dadarbuun qabame tokko, yoo yeroodhaan yaalamuu baate rakkoo fayyaa kan biraatiif saaxilamuu ni dandaa?

1.eeyyee

2. lakkii/gonkumaa

99. hin beeku

134.dhibee fayyaa dabalataan (Complications) namni yeroodhaan dhibee (STIs) irraa yeroodhaan hin yaalamne argachuu danda'u maal faadha?

Tarreessi:

135. dhukkubi walquunnamtii saalaatiin darbu yaalumsa/qoricha qabaa?

1.eeyyee

2. lakkii/gonkumaa

99. hin beeku

136.dhaabbilee fayyaa kanaa gadii keessaa kamitti yaalumsi dhibee walquunnamtii saalaatiin darbu argama? (**deebi'ii tokkoo oli ta'uu ni danda'a**).

1. Hospitaala

2. buufata fayyaa

3. kilinika barattootaa

4. Marie stops clinic
5. Family guidance association (youth center)
6. kilinika dhuunffaa
88. kan biraa ibisi

IV. Syndromes

137. dhukkuba walquunnamtii saalaatiin darbuun qabamtee beektaa?

1. eeyyee
2. lakki/gonkumaa

138. baatiiwwan kudha lammaan darban kana keessatti dhukkuba walquunnamtii saalaatiin darbuun qabamtee beektaa?

1. eeyyee
2. lakki/gonkumaa

139. baatiiwwan ja'an darban kana keessatti dhukkuba walquunnamtii saalaatiin darbuun qabamtee beektaa?

1. eeyyee
2. lakki/gonkumaa

Dhiirota qofaadhaaf:

140. baatiiwwan kudha lammaan darban kana keessatti, mallattoo kanaa gadii keessaa kamtu sirratti mulatee beekata?(**deebi'I baayyee**)

1. madaa naannoo qaama walhormaata
2. dhangalaa qaama walhormaataa keessaa ba'u
3. hiita'uu hanqaaqu dhiiraa

Dubartoota qofaadhaaf:

141. baatiiwwan kudha lammaan darban kana keessatti, mallattoo kanaa gadii keessaa kamtu sirratti mulatee beekata?(**deebi'i baayyee**)

1. dhangala qaama walhormaata keessaa ba'u
2. madaa naannoo qaama walhormaataa
3. dhukkubbii gara jalaa

V. ammalleffanna yaalumsaa

142. mallattoo dhiyaanya sirratti mullateef yaalumsaa agattettaa?

1. eeyyee
2. lakki

143.mallattoo dhiyaanya sirratti mullateef, eessatti yaalamte?

1. Hospitaala
2. buufata fayyaa
3. kilinika barattootaa
4. Marie stops clinic
5. Family guidance association (youth center)
6. kilinika dhuunffaa
7. yaalumsa haadaa
88. kan biraa ibisi

144.mallattoo dhiyaanya sirratti mullate kun hagamiif sira turee utuu yaalumsa hin argatin?

1. guyyaa _____
2. baatii _____
3. hin yaadadhu _____

VI .qulqulina kenniinsa tajaajila fayyaa

145.oogeessa yaalu hargachuuf yeroo sitti fudhate/haga eegde

- 1.baayyee nama nufisiisa
- 2.nama nufisiisa
- 3.Neutral
- 4.itti quufeera
- 5.baayyee iitti quufeera

146.haalli kutaayaalumsa itti kennamuu kan mana yaalichaa

- 1.baayyee nama nufisiisa
- 2.nama nufisiisa
- 3.Neutral
- 4.itti quufeera
- 5.baayyee iitti quufeera

147.siistemin kaffaltii kan mana yaalichaa

- 1.baayyee nama nufisiisa
- 2.nama nufisiisa
- 3.Neutral

4.itti quufeera

5.baayyee iitti quufeera

148.yeroo yaalumisa akkataa dhoksaaa itti eeganu(privacy)

1.baayyee nama nufisiisa

2.nama nufisiisa

3.Neutral

4.itti quufeera

5.baayyee iitti quufeera

149. ga'umsa tajaajila rifeeraalii mana yaalichaa

1.baayyee nama nufisiisa

2.nama nufisiisa

3.Neutral

4.itti quufeera

5.baayyee iitti quufeera

150.jiraachuu qorichaatii fi meeshaalee yaalumsaa mana yaalchaa

1.baayyee nama nufisiisa

2.nama nufisiisa

3.Neutral

4.itti quufeera

5.baayyee iitti quufeera

151.sa'a hojii mana yaalichaa (yeroo itti banamuu fi itti cufamu)

1.baayyee nama nufisiisa

2.nama nufisiisa

3.Neutral

4.itti quufeera

5.baayyee iitti quufeera

152.walitti dhufeenya oogeessaa wajjinii

1.baayyee nama nufisiisa

2.nama nufisiisa

3.Neutral

4.itti quufeera

5.baayyee iitti quufeera

153.qulqulina mana yaalichaa

- 1.baayyee itti hin quufne
- 2.itti hin quufne
- 3.Neutral
- 4.itti quufeera
- 5.baayyee iitti quufeera

154.kabajaan yaalamuu

- 1.baayyee itti hin quufne
- 2.itti hin quufne
- 3.Neutral
- 4.itti quufeera
- 5.baayyee iitti quufeera

155.muuxannoo oogeessichaa

- 1.baayyee itti hin quufne
- 2.itti hin quufne
- 3.Neutral
- 4.itti quufeera
- 5.baayyee iitti quufeera

156.ilaalcha oogeessichaa

- 1.baayyee itti hin quufne
- 2.itti hin quufne
- 3.Neutral
- 4.itti quufeera
- 5.baayyee iitti quufeera

VII. Questionnaires to Assess Attitude

157. waa'ee dhukkubota saalqunnamtin daddarban maal beekta ?

1.dhukkuba dha

2. asmaati dha

3. michii dha

88.kan biraa

158. dhukkubni saalqunnamtin daddarbu naannoo kessanitti bay'inaan ni argama jettani yaaaddu?

1. Eyyen

2.Lakki

99. Hin beeku

159. wal qunnamti saalaan alatti karaale ittin daaddarbu danda'u ni beekta?

1. Eyyen
2. Lakki
99. Hin beeku

160. Dargaggonni dhukkuba saal-qunnamtif irra caalaatti ni saaxilamu jettee yaaddaa?

1. Eyyen
2. Lakki
99. Hin beeku

161. Namoota saalaan wal fakkaattan giddu saal-qunnamtin yoo godhame dhukkubichi ni darba jettani yaaddu?

1. Eyyen
2. Lakki
99. Hin beeku

162. Namni dhukkuba saal-qunnamtin qabame haala salphaa ta'en haawaasa kessaa adda baasuun ni danda'ama jettani yaadduu?

1. Eyyen
2. Lakki
99. Hin beeku

163. Dhukkubni nafsaalaa carraa HIV/AIDS qabamuu ni bal'isa jette yaaddaa?

1. Eyyen
2. Lakki
99. Hin beeku

164. Dhukkuba nafsaalaa ittisun ni danda'ama jette yaaddaa?

1. Eyyen
2. Lakki
99. Hin beeku

165. Koondomin dhukkuba nafsaalaa ni ittisa jette yaaddaa?

1. Eyyen
2. Lakki
99. Hin beeku

166. Barumsi fayyaa dhukkubni nafsaalaa akka hin daddarbine

1. Eyyen
2. Lakki
99. Hin beeku

167. Hiriya jaalalaa tokko qofa qabaachun dhukkuba nafsaalaan daddarbu ni ittisa jettani yaadduu?

1. Eyyen

2.Lakki

99. Hin beeku

168. Nami dhukkuba nafsalaan qabame talaalli argachu danda'a jettani yaaddu?

1. Eyyen

2.Lakki

99. Hin beeku

169. dhukkubni nafsalaaw hawaasa kessatti logummaa ni uuma jette yaaddaaa?

1. Eyyen

2.Lakki

99. Hin beeku