

*Full Length Research Paper*

# Knowledge and misconception of young women toward sexual transmitted infection and condom use in Northern Ethiopia: Cross sectional study

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The aim of this study was to assess the knowledge and misconception about sexual transmitted infections (STIs), mode of transmission, prevention methods and use of condom among young women in Northern Ethiopia. A facility-based cross-sectional study was employed among 326 young women aged 15 to 24 years from 1st to 30th May, 2013. A multistage sampling technique was used to select young women attending outpatient facility. A pre-tested interviewer guided structured questionnaire was used for data collection. Data was entered, cleaned and analyzed using statistical package for social sciences (SPSS) version 20.0. Descriptive statistics like frequency, percent, table and graphs were used to present the findings. From the total of 326 young women included in this study, 305 women participated with a response rate of 93.6%. One hundred and fourteen (40.4%) of the young women had poor knowledge about STIs mode of transmission and prevention methods. Regarding prevention of STIs, 119 (39%) youths were not aware of at least one method of STI prevention methods such as consistent condom use, being faithful and abstaining. About 28 (9.9%) youths had misconceptions regarding prevention methods of STIs and 149 (48.9%) young women had ever used condom. Seventy three percent of the youths knew at least one place where they can get condom. This study indicated that there is poor knowledge and high misconception about sexual transmitted infections, mode of transmissions and prevention methods among young women and many do not use condom during sexual contact. Therefore, it is better to design strategies to create awareness for younger women in school and those out of school about STIs. In addition, establishing reproductive health and HIV/AIDS club is an important intervention at school.

**Key words:** Knowledge, misconception, condom use, young women, Northern Ethiopia.

## INTRODUCTION

Sexual transmitted infection (STI) is an infections cause by organisms that are passing through sexual activity from an infected partner. More than 40 types have been identified and regarding as group of communicable

diseases that are transmitted predominantly by unprotected sexual contact (Orisatoki and Oguntibeju, 2010). STIs in nature can be either asymptomatic or symptomatic. Regardless of the presence or absence of

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symptoms, all STIs can lead to major complications if left untreated like infertility, Human Immunodeficiency Virus (HIV), prolonged pelvic pain and psychological problems (Las and Vasan 2000).

According to World Health organization (WHO) estimates, about 484.4 million new cases of curable STIs occurred among both sex aged 15 to 49 years old every day (World Health Organization, 2012). STI's including HIV mainly affects sexually active young people. Young adults aged 15 to 29 years, account for 32% of Acquired Immunodeficiency Syndrome (AIDS) cases reports in developing countries (Alexander and Lipi, 2008). Risky sexual behavior such as unprotected sex among the youths who hold various misconceptions about the use of condom for protective sex is the main factor for increasing the magnitude of STIs prevalence among youths (Orisatoki and Oguntibeju, 2010).

In developing countries such as sub-Saharan Africa, STI case burden is very high. About 108 million STIs cases are occurred every day. It is estimated that 80 to 90% of the global burden of STIs occurs in the developing world where there is limited or no access to diagnostics (World Health Organization, 2007) and little study has been carried out on their prevalence and incidence rate (Berhane et al., 2006). In Ethiopia, despite the large scale up of health care investments in prevention and treatment of sexual transmitted disease (STD) (TRHB, 2013) STIs prevalence remain a major problem for the youths. Yet, STIs are grossly underreported in Ethiopia (Berhane et al., 2006).

In Ethiopia, modern contraceptive utilization by young women is poor; only 27.4% of youths aged 15 to 24 years use any modern contraceptive and with 54.6% unmet need for modern contraceptive in 2011. About 92.3% of young women have knowledge about male condom and 55% about female condom but only 0.4% of women age 15 to 24 used male condom during sexual contact in 2011 (CSA Ethiopia and ICF International, 2012). STD prevalence among youth women in Ethiopia rises from 2.9 to 3.6% during 2005 and 2011 (CSA Ethiopia and ICF International, 2012). In addition, Ministry of Health compiled 113,386 and 104,607 STIs cases during 2011 and 2012 in the country (MoH FDRE, 2012). However, the factor associated with STD among youths is not well studied in Ethiopia and study area. Therefore, the aim of this study is to assess the knowledge, misconception and condom use among young women in Northern Ethiopia. In which it helps as input for the prevention and control of STDs programs among youths in the Ethiopia.

## METHODOLOGY

### Study setting and period

This study was conducted from 1 to 30 May, 2013 in Ceteral zone of Tigray, Northern Part of Ethiopia. It is 1,017kms far from the capital City of Ethiopia. In central zone there are three hospitals, 57 health centers which offer service for STD's patients based on

syndromic approach. Health coverage of the zone is 85%. They have been given service for youths in separated areas (TRHB, 2013).

### Study design and sampling

Health facility based cross-sectional study design was employed. The study population was a randomly selected young women age from 15 to 24 years who visited the selected health facilities during the study period. There were a total of 326 young women who participated in the study. The sample size was calculated using a single population proportion formula by taking previous study in Ethiopia, 3.6% prevalence of STDs (Central Statistical Agency and ICF International, 2012) with 95 % confidence interval and a precision of 3%, and adding 10% for non response rate, the calculated total sample size was 323 young women. Multi-stage sampling technique was used to select the study participants.

### Measurements

Data was collected using semi-structured questionnaire pretested and adapted to local context by reviewing similar literatures and from Ethiopian demographic and health survey (EDHS) (CSA Ethiopia and ICF International, 2012; Bereket et al., 2013). The questionnaire includes variables on socio-demographic, reproductive, sexual behaviors and STD related Knowledge's. The instrument was first prepared in English and then translated to the local language Tigrigna to make it easy and understandable, and also to reduce language barriers between the data collectors and study subjects. Data was collected by ten female nurses and supervised by three health officers. Data were collected from youths who came for health service. Quality of the data was assured by carrying out careful design, translation and retranslation of the questionnaire, cleaning of data and appropriate recruitment and training was taken for both data collectors and supervisors. The principal investigator coordinated the data collectors through regular daily supervision of data collection. All completed questionnaire were examined by the principal investigator for completeness and consistency. Then the collected data were edited, coded, entered, cleaned and analyzed using SPSS software version 20.0 statistical package. The magnitude of knowledge and misconception was estimated by preparing 12 item questions which contains question about STIs awareness, mode of transmission and prevention, and aware of misconception about STDs prevention. If a young woman answered at least eight (67%) items question correctly, she was considered as having good knowledge otherwise she is considered as having poor knowledge. Use of condom was measured if the young woman ever use either male or female condom when she comes in contact with her boyfriend.

### Data processing and analysis

The outcome variable of this study was knowledge and misconception about STIs prevention methods and mode of transmission among young women which is categorical variable and categorical data analysis method was used. Descriptive analysis: the categorical variables were submitted to absolute (n) and relative (%) frequencies. Quantitative variables were submitted to median, mean and standard deviation. The magnitude of knowledge was estimated. If a young woman answered at least eight items correctly, she was considered as having good knowledge otherwise she is classified as having poor knowledge.

### Ethical consideration

Ethical clearance was obtained from Mekelle University Ethics

**Table 1.** Socio-demographic characteristics of young women, Central Zone of Tigray, Ethiopia.

<b>Socio demographic variables</b>	<b>No</b>	<b>(%)</b>
<b>Residence</b>		
Urban	202	66.2
Rural	103	33.8
<b>Age of respondent</b>		
15-19	80	26.2
20-24	225	73.8
<b>Religion of respondent</b>		
Orthodox	279	91.5
Muslim	22	7.2
Other*	4	1.3
<b>Ethnic group</b>		
Tigray	299	98
Other**	6	2
<b>Education level</b>		
No education	28	9.2
Primary	71	23.3
Secondary	115	37.7
Above secondary	91	29.8
<b>With whom they lived</b>		
Alone	75	24.6
Parents /relatives	110	36.1
Husband/steady partner	120	39.3
<b>Occupation</b>		
Student	93	30.5
Unemployed	39	12.8
Small trade	40	13.1
Daily labor	37	12.1
House wife	43	14.1
Commercial sex worker	5	1.6
House servant	24	7.9
Government employee	24	7.9
<b>Monthly family income</b>		
200-450	39	12.8
451-1000	149	48.9
1001-1500	77	25.2
1501-5000	40	13.1

Other\*: Catholic and protestant. Other\*\*: Amara and Oromo.

Review Board. Letter of support was obtained from the Tigray Regional Health Bureau. Moreover, an informed oral consent was obtained from all study participants. The study participants were informed about the purpose study. They were also told they had right to discontinue or refuse to participate in the study any time they wanted to. Confidentiality and privacy were maintained.

## RESULTS

### Socio-demographic characteristics

A total of 305 young women participated in this study giving a response rate of 96.3%. Nearly two third of the young women (66.2%) were from urban residence, and most of them 225 (73.8%) were in the age group between 20 to 24 years. The median age of the young women was 21 years (range from 15 to 24 years). Most of the young women 279 (91.5%) were Orthodox Christian follower and almost all 299(98%) were Tigrayan in ethnicity. About 115 (37.7%) young women had secondary school education and 91(29.8%) had above secondary school education. Concerning occupation of the young women, 93(30.5%) were students (Table 1).

### Sexual relationship and condom use by young women

Majority of the young women, 217 (71.1%) had experienced their first sexual intercourse between the age of 15 and 19 years and 9.8% between the age of 9 and 14 years. The median age at first sex was 17 years (range 9 to 24 years). Out of the total young women, 155 (39.7%) were married and have cohabiting partners, however, 69 (29.9%) were separated. Of the total young women, 27 (8.9%) had two and more sexual partners in the last 12 months and 51(16.7%) had two and more sexual partners in their life time. The median age of the partners was 28 years (range 16 to 60 years). Regarding the sexual relationship, almost half 155 (50.5%) of the young women were married and about one fourth of the young women had boyfriend. Regarding their last sexual intercourse, 19 (6.2%) young women were forced and 18 (5.9%) were cheated for money (Table 2).

### Behavioral characteristics of the young women

During the last 12 months, 67(22%) young women reported that they had watched pornography. 66 (21.6%) young women reported that they drank alcohol during the last sexual intercourse, of which 49 (78.6%) did not use condom during their sexual intercourse. Similarly, 12 (3.6%) young women reported that they chew chat. Among the total young women, 149 (48.9%) never used condom. Of those young women who ever used condom, 95 (63.8%) used condom in their last sexual intercourse and 32 (21.7%) consistently used condom (Table 3).

### Knowledge of young women about mode of transmission and prevention of STIs

Most of youths 282 (92.5%) heard about STIs. About 114

**Table 2.** Sexual behavior and condom use by young women, Central Zone of Tigray, Ethiopia.

<b>Sexual relationship of young women</b>	<b>No</b>	<b>%</b>
<b>Marital status</b>		
Married /cohabiting partner	155	50.8
Boyfriend	135	44.2
Divorced/widowed	15	4.9
<b>Partners living condition</b>		
Living with her now	162	70.1
Living elsewhere	69	29.9
<b>Age at first sexual intercourse</b>		
≤14	30	9.8
15-19	217	71.1
20-24	58	19
<b>Age of the last male partner</b>		
15-24	95	31.1
25-34	154	50.5
35-44	39	12.8
≥45	17	5.6
<b>Number of sexual partner in the last 12 months</b>		
One	278	91.1
Greater or equal to two	27	8.9
<b>Relationship to the last sexual partner</b>		
Husband /cohabiting partner	155	50.8
Boyfriend	76	24.6
Casual acquaintance	74	14.3
<b>Number of sexual partner in life time</b>		
One	254	83.3
Greater or equal to two	51	16.7
<b>Last sexual intercourse</b>		
Voluntary	268	87.9
Forced	19	6.2
For favor/cheating	18	5.9

(40.4%) youths had poor knowledge on STIs mode of transmission and prevention. About 72 (23.6%) youths were not aware of at least one method of STIs transmission such as unprotected sexual intercourse, contaminated sharp materials, and mother to child. The predominant mode of transmission mentioned by the youths was unprotected sex 249 (88.3%). The predominant unmentioned mode of transmission was from mother to child 219 (77.7%). Regarding prevention of STI 119 (39%), youths were not aware of at least one

method of STI prevention method such as consistent condom use, being faithful and abstaining. The predominant prevention method mentioned by the youths was being faithful 199 (70.6%). The predominant unmentioned prevention method was abstaining 164 (58.2%). About 28 (9.9%) youths had misconceptions regarding prevention methods of STIs. Seventy three percent of the youths knew at least one place where they can get condom. The predominant place mentioned for the distribution of condom was government health

**Table 3.** Behavioral characteristics of young women in the last 12 months, Central Zone of Tigray, Ethiopia, April, 2013.

<b>Behavioral characteristics of young women</b>	<b>No</b>	<b>(%)</b>
<b>Frequency of watching pornography (n=305)</b>		
Not at all	238	78
Ever watched	67	22
<b>Drink alcohol in the last sexual intercourse with the last partner (n=305)</b>		
Neither partner nor respondent	239	78.4
Both partner and respondent	66	21.6
<b>Last partner used condom after drinking alcohol (n=66)</b>		
No	49	74.2
Yes	17	25.8
<b>Chew chat in the last sexual intercourse (n=305)</b>		
Partner or respondent	12	3.9
Neither	293	96.1
<b>Condom used during the last sexual intercourse with the last partner (n=305)</b>		
No	54	36.2
Yes	95	63.8
<b>Ever used condom (n=305)</b>		
No	156	51
Yes	149	48.9
<b>Consistently condom used (n=149)</b>		
No	117	78.5
Yes	32	21.5
<b>Ever heard of STD (n=305)</b>		
No	23	7.5
Yes	282	92.5

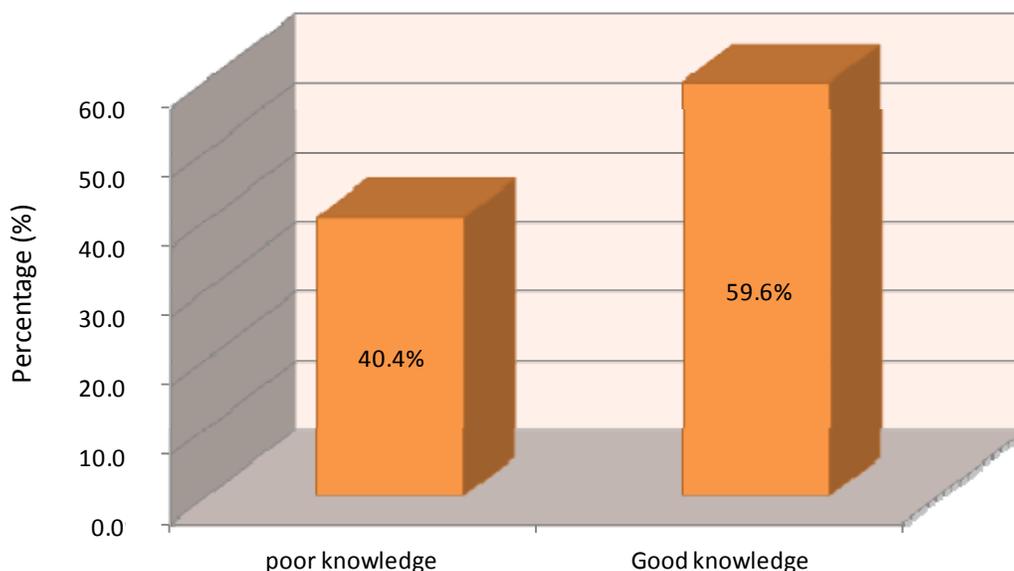
institution 194 (82.7%). Majority of the youths 197 (64.6%) had not convinced their partner to use condom even though they had interest to use condom during sexual intercourse (Figure 1).

## DISCUSSION

This study determines the knowledge and misconception status of young women toward sexual transmitted infections, methods of prevention and mode of transmission. About 40.4% young women in this study had poor knowledge on STD transmission and prevention which is lower compared to a study in Welaita University (64%) (Rajapure et al., 2013) and it is comparable with the study of Gondar (Yitayal et al., 2011). This difference might be due to health institution based study, in which

respondents may have had better contact and got information from health professionals that may increase their knowledge on STIs.

Respondents who did not know at least two symptoms of STD in this study were 55.3%. It is higher compared with a study conducted in Addis Ababa high school among adolescents, where 17.9% of the youths had knowledge of at least two symptoms of STDs (Moges et al., 2013). Health institution based study may have caused such difference because youths who came to health institution may have accessed to information on STIs from health providers. In our study, young women had misconception regarding mode of transmission and prevention of STD. This is consistent with a study conducted in Southern Ethiopia and South Africa, (Muluken and Maereg, 2012; Rajapure et al., 2013). This may be due to the fact that youth's misconception may



**Figure 1.** Knowledge of young women about STD transmission and prevention in central zone of Tigray, Ethiopia, April, 2013.

result in unprotected sexual intercourse with infected individual that may acquire an STD.

This study has revealed lower condom use compared to a study conducted in northeast Ethiopia (Moore et al., 2007). This may be due to a difference in the socio-economic characteristics of the respondent and differences in infrastructures. In our study, about 17% young women have above one sexual partner in their life. Of those who had above one partner in their life, 60.8% had history of signs and symptoms of STD compared to those who had one partner (13.4%). This is lower compared to a study conducted among University students (52.6%) and among private college students (35%) (Zelalem, 2013). This may be due to the difference in socio-demographic characteristics, study area and study populations. This study has also identified 51.1% young women who had never used condom.

As a limitation of this study, STIs was assessed only through the report of young women. So, under reporting or over reporting may be possible since the study deals on sensitive issues and personal questions. Therefore, any interpretation of this finding within these variables shall take into account the degree of precision. The strength of this study is the use of measurement of Ethiopian Demographic and Health Survey, which enabled the making and comparison of findings with other national and international literatures to be valid.

## Conclusion

Young women had low knowledge on STIs rout of transmission and prevention methods. In addition,

misconceptions about prevention of STIs were one of the worst problems among the young women. Many women do not use condom during sexual contact. Having multiple sexual partners in lifetime, low awareness of at least two clinical features of STIs, having misconception on the mode of transmission and prevention of STIs and having a previous history of STIs were found to be the problems of young women. To solve the problem, multiple approaches should be needed. Working with concerned stakeholders mainly health sector and education sector in order to address young women and to improve the knowledge of young women on STI and avoid misconceptions on the mode of transmission and prevention. Establishing and strengthening youth friendly services are also mandatory. In addition, use of local media like FM radio, distributing leaflets should be designed to the level of young women.

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## Conflicts of interest

The authors declare that they have no conflicts of interest.

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