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Glimpse of University Students' Sexual Behaviors and Their Perception of Susceptibility of HIV/AIDS: the Case of University of Gondar

Tadesse Awoke

Faculty of Social Sciences and the Humanities, University of Gondar

Solomon Meseret

School of Public Health, University of Gondar

Abstract

One of the devastating consequences of the pandemic HIV/AIDS is that it highly affects young people aged 15-24, and in Ethiopia most University students are in the aforementioned age range. On top of the age range while university campuses constitute a potentially fertile breeding ground for HIV/AIDS because they bring sexually active young people together (in close physical proximity they are also void of systematic supervision for these sexually active young people. Thus, dealing with this section of a society is an excellent strategy to slowdown the spread of the pandemic. In view of this, the main purpose of this research is to assess University students' sexual behaviours and their perception of susceptibility of HIV/AIDS. In order to achieve this objective, institution based cross-sectional study with both quantitative and qualitative approaches were used. Samples of students for the study were selected using stratified sampling; where colleges/faculties were used as stratification factor. Questionnaire and focus group discussion were used to collect data from students. Interview was conducted with a University official. A total of 409 students were included in the study for of which 242(59.2%) and 167 (40.8%) were males and females respectively. The result revealed that 236 (59%) of the students were sexually active, of these 37.28% were inconsistent condom users, 10.59% had sex for money and gift, 27.97% had two or more sexual partners and 5% had sexual intercourse with commercial sex workers. About 24.2% of those who had sex in the past perceived that they were at risk of acquiring HIV/AIDS. Variables such as being tested for HIV (AOR = 4.989, 95% CI = (2.970, 8.381)), risk susceptibility (AOR = 2.555, 95% CI = (1.385, 4.713)) and money and gift (AOR = 4.507 95% CI = (1.623, 12.518)) were found to be significantly associated with sexual behaviours of students. From the result it can be concluded that more than half of the students were sexually active. Students were experiencing unsafe sex. Means for money and gifts, risk susceptibility, and being tested for HIV were factors affecting sexual behaviours of students. Hence efforts should be done so as to expand health education, strengthening anti-HIV/AIDS clubs and VCT centers within the jurisdiction of universities to reverse risky sexual behaviours and illusion of invulnerability of students by concerned bodies such as governmental and non-governmental organizations that are working with the universities.

Key words: Sexual behaviours, Perception of susceptibility of HIV/AIDS

INTRODUCTION

Background

Never in the recorded history of mankind has there arisen such a widespread and fundamental bubonic plague to human development as HIV/AIDS. The pandemic, now at the beginning of its third decade, is one of the greatest challenges of human beings (Helen, 2002; World Bank, 2001).

HIV/AIDS has left virtually no country (rich or poor) untouched. Africa, however, has the highest incidence of HIV infection in the world. That is out of the total of 40 million people living with HIV, 95 percent is said to be residing in the developing world and among these 71 percent is found in sub-Saharan Africa. The rate at which the pandemic is spreading is also much higher in the region (UNAIDS, 2002 cited in Assefach, 2007). In sub-Saharan Africa, Ethiopia is one of the worst-hit countries by the epidemic (Haile, 2006; Eyob, 1999).

One of the devastating consequences of the pandemic is that it highly affects young people aged 15-24 (UNAIDS, 1998) and in Ethiopia most university students are in the aforementioned age range. On top of the age range, university campuses constitute a potentially fertile breeding ground for HIV/AIDS because they bring sexually active young people together (in close physical proximity), and they are void of systematic supervision for these sexually active young people (Sigot, 2001; Saint, 2004 cited in UOG,2005).

So, efforts have to be made to prevent university students from the pandemic- HIV/AIDS. In light of this, the objective of this study is to investigate university students' Sexual behavior and their perception of susceptibility of HIV/AIDS; there by designing pertinent strategies that are applicable to prevent university students from the pandemic.

LITERATURE REVIEW

HIV/AIDS in the world

Today, HIV/AIDS is one of the major causes of morbidity and mortality all over the world. A global overview of the pandemic stated that no country in the world remains unaffected. In the world today, a total of 40 million people are living with HIV/AIDS (UNAIDS, 2002 cited in Asefch, 2007).

HIV/AIDS in Africa

Africa is the worst hit part of the world with the pandemic disease. The continent lost millions of its people particularly its youth. Besides, the number of people who are living with the virus is very large in the continent than rest part of the world. Sub-Saharan Africa in particular shares two-third (71%) of the infected population (WHO, 2004).

HIV/AIDS in Ethiopia

Ethiopia, being one of the countries in sub-Saharan Africa, is highly affected by HIV/AIDS. It is the third most affected country by the pandemic next to India and South Africa (UNAIDS 1998).

Students' /Youth sexual behaviours and perception of susceptibility of HIV/AIDS

In terms of numerical strength the youth is the largest in history, nearly half of the population being less than 30 years old. They have not known a world without HIV/AIDS. Young people are at the center of the pandemic. An estimated 10 million young people aged 15-29 years are living with HIV/AIDS and more than 6000 contract the virus every day. The pandemic is affecting young people disproportionately. As it is the case in other nations, in Ethiopia a large proportion of new HIV infection, is occurring in the young people (Zebideru, 2005). Several characteristics such as risky sexual behaviours and perception of susceptibility of HIV/AIDS have been highlighted by researchers as reasons for the disproportionate

infection of youth with the pandemic. In relation to this Ostrow stated that the youth/young people are recognized to be at a high risk of contracting HIV/AIDS because of particularly strong sense of invulnerability (Ostrow, 1999). Similarly, O'leary (2002) has found that most sexually active youth do not like to use condom consistently. Congruent with the above fact, sexual intercourse with out condom, sexual intercourse with casual partners, having two or more sexual partners and sexual intercourses with CSWs were found to be high among young college and university students (Yesuf, 2007; Getnet, 2009).

In another research conducted in UK at Oxford University most students did not consider that they were at risk of becoming infected by the HIV and very few students appeared to be at risk as they reported (Murphy, 1993). Another finding also showed weak perception of risk acquisition among youth regarding HIV/AIDS (Zebideru, 2005). Moreover, high sexual engagements and high risk sexual activities were observed among college students than lower grade students (EDHS, 2005 as cited in Yesuf, 2007). Besides, studies made by researchers like Tegegn (2009), Molla, (2007), Semie, (2000) witnessed consistent fact with the above studies.

Socio-demographic factors and sexual behaviour

Sexual behaviour is a complex issue. Sexual behaviour and experience varies across various socio-demographic factors. Gender, age, religion and region/place of birth, are pertinent socio-demographic factors linked with sexual behaviours and experience of youth as identified by researchers. Tegegn (2009), for instance, found in Adama university, more male (68.2%) to performed sexual intercourse than female (31.8%). Conforming evidence was also reported by Etsub (2009). According to her study, in Addis Ababa University, male students were more likely to experience sexual intercourse than female students. On the contrary, according to CSA young females found to be much more likely to ever had sexual intercourse than young males (CSA, 2005 cited in Estube, 2009). Youth from urban background are more likely to engage in sexual relations than youth from rural background (CSA, 2006). From previous studies the mean age at first sexual intercourse was 18 years (Zebideru, 2005; Yesuf, 2007). What is more, religion of a person also influences sexual behavior of a person. Penhollow et al (2005) stated that Religious conviction plays a major role in an individual's sexual behaviour.

OBJECTIVES

This study is designed to:

- Examine University students sexual experiences and risky sexual behaviours, if any
- Inspect difference, if any, in sexual relations and sexual experiences among university students before and after joining University.
- Specify students perception of susceptibility of HIV/AIDS
- Indicate if students were exposed to STIs
- Indicate if students were being tested for HIV
- Assess factors responsible, if any, for sexual relations/engagement among university students
- Depict the efforts made by the university to prevent students from HIV/AIDS.

- Point out pertinent strategies that are applicable to university student

METHODOLOGY

This part consists of sub-sections such as study area, study design, sampling technique, data sources, data analysis, and ethical consideration. Brief, description of each section is presented here under:

STUDY AREA

This study was conducted in all the campuses of the University of Gondar.

STUDY DESIGN

This study was cross-sectional in terms of time, applied in terms of purpose, descriptive in terms of design/strategies, survey in terms of research questions addressed by the research, qualitative as well as quantitative in terms of approach followed in this research and field in terms of setting of the research. In short cross-sectional, applied, descriptive, survey, qualitative as well as quantitative and field researches employed in this study.

Sampling techniques and sample size

As we were conducting the research, there were a total of 10,399 students who were enrolled in at the University of Gondar as regular entrants. In terms of faculty 2802, 2788, 2221, 1886, 534, 368 students were at GCMS, FNS, FSSH, FME, Law, and FVM in sequence. From this population, we chose 400 students by using stratified random sampling technique. We used the faculty to which students belonged as strata and then we chose the actual proportionate number of respondents from each faculty randomly. We claim the selection is at random because we selected students available at the time of data collection. As the absence of other student is not related with this study topic at the time of data collection, these will both minimize selection bias and increase randomness. A university official was purposively included in the study for the triangulation of results. A group of 8 students also discussed the topic of their interest with the investigators as facilitators. Accordingly, a total of 409 participants were involved in the study.

Study variables

Sexual behaviours (whether students had ever had sex or not)

Perception of susceptibility (self expressed susceptibility of risk of getting HIV/AIDS)

Independent variable

Sex, age, age at first sex, place of birth, religion, faculty, academic year, money, tested for HIV/AIDS, knowledge on prevention strategies, students' opinion on the potential factors of sexual engagement in university.

Operational definition

Sexual Behaviours: students' engagement in sexual intercourse/relation or experience; be it safe or unsafe.

Perception of susceptibility of HIV/AIDS: An individual's assumption of vulnerability to HIV/AIDS infection according to one's own understanding and awareness. An individual's own risk perception to HIV/AIDS infection.

University Students: Regular entrants in the University of Gondar for attaining pursuing their education in diverse faculty/college.

Sexually transmitted disease: any self-reported sexual infection.

DATA SOURCES/INSTRUMENTS

Questionnaire was used to collect data from student respondents. The questionnaire was designed in such a way that it could be understood by respondents unequivocally. This was done during the pre-test. The questionnaire had more of closed-ended items, but sporadically open-ended items were included so as to enrich the data and give freedom for respondents to spell out what is in their mind. The questionnaire has a total of 20 items.

Apart from questionnaire, we had also used semi-structured interview as a tool of research in order to get data from the university official. What is more, we had still used FGDs, with guiding questions in this project. The content validity of the questionnaire and the interview items were checked by professionals in the area. The reliability of items, in the questionnaire, were checked through Kuder-Richardson estimate of reliability. Additionally inter-raters estimate of reliability was also used to check the reliability of the questionnaire.

DATA ANALYSIS

In the end, the collected data were analyzed and interpreted both qualitatively and quantitatively. Descriptive statistics such as pie chart, and tables were employed to depict the data and summary measures as percentages were used. Thematic/content analysis method was used for the qualitative part of the study whereas an unadjusted and adjusted binary logistic regression analysis were used to assess factors associated with the sexual history of university students. Strength of association is assessed by odds ratio. Statistical stability of tests was checked with 95% confidence interval. Significance was declared at 5% significant level.

ETHICAL CONSIDERATION

In this research, at the outset, participants of the study were informed about the purpose of the research by the researcher. After that the decision was left to the participant to be a part of the research or not. In short, securing consent from respondents was the primary step in this research. Moreover, no coercive actions were used to get responses from the research participants. The dignity, personal identity and ideology of respondents were not violated at any phase of the research.

RESULTS AND DISCUSSIONS

This section presents results obtained from participants through the questionnaire, interview and FGDs. For the sake of better visualization results obtained through different instruments, and previous research findings are presented in integrated manner.

Socio-demographic characteristics of students

Table 1: Socio -Demographic Characteristics of University of Gondar Students from January to June 2010.

Variables		Count (%)
Academic year	Year one	47(11.8)
	Year two and above	353(88.2)
Sex	Male	237(59.2)
	Female	163(40.8)
Birth place	Urban	247(61.8)
	Rural	153 (38.2)
Religion	Orthodox	310(77.5)
	Islam	29(7.3)
	Protestant	40(10.0)
	Catholic	6(1.5)
	None	10(2.5)
	Other	5(1.3)

From Table 1, it can be seen that 47 (11.8%) and 353 (88.2%) of the respondents were year one, year two and above respectively. In this table, it can be observed that 237 (59.2%) of the participants were male while 163 (40.8%) of the respondents were female. It can also be read that 247 (61.8%) and 153 (38.2%) of the respondents were from urban and rural areas, respectively. Besides, 310 (77.5%), 29 (7.3), 40 (10%), and 6 (1.5%) of the students had Orthodox, Islam, Protestant, Catholic religious affiliations in that order. Whereas 10 (2.5%) of the students were none religious and 5 (1.3%) of them were from religions other than the abovementioned.

Sexual history and risky sexual behaviours of students

Table 2 Sexual experiences and Risky Sexual Behaviours of University of Gondar Students from January to June, 2010.

Variables		Count (%)
Sexual practice	Yes	236(59.0)
	No	164 (41.0)
Inconsistent condom use	Yes	88 (37.28)
	No	148 (62.72)
Sex for money and gift	Yes	25 (10.59)
	No	211(89.41)
Having two or more sexual partner	Yes	66(27.97)
	No	170(72.03)
Sexual intercourse with commercial sex workers	Yes	12 (5)
	No	224 (95)

Results of the study in Table 2 showed that 236 (59%) of the study participants were sexually experienced when this survey was conducted. A study conducted by Girma (2008) also witnesses similar fact. According to his study about half of the study participants were sexually experienced. Inconsistent condom use 88 (37.28%), sex for money and other valued resource 25 (10.59%), having two or more sexual partner 66 (27.97%), and sexual intercourse with commercial sex workers 12 (5%) were risky sexual behaviors as reported by sexually active students of the present study as it can be seen from Table 2. In a similar vein, a study made at Adama University also showed about 44.5% multiple sexual partnership and 37.5% inconsistent condom use among sexually active students (Tegegn, 2009). In another study, 53.3% of the sexually active youth respondents reported they had two or more sexual partners. One third (35%) of the sexually active male youth had sexual contact with female commercial sex workers. Inconsistent use of condom was also reported by students of the study (Molla, 2007).

A study by Getnet (2009) also revealed corresponding result. According to the study, overall sexual practices of undergraduate students were characterized by unsafe sex (procrastinating HIV testing, promiscuity, and sex with CSWs without condom). According to the findings of this study and pervious researches findings, to some extent, it is possible to say sexual engagements of undergraduate regular students were characterized by unsafe/unprotected sex.

Difference in sexual engagement among university students before and after joining university

As it is indicated in Table 3, of the sexually active students 154 (65.25%) of the respondents reported that they had had their first sexual debut after they joined the University and 82 (34.74%) of the participants reported they had had sex before they joined the university. Corroborating evidence also found in a study made by Silesh. According to his study many students (68.4%) started sex while they are in campus (Silesh, 2009). Nearly 15% of sexually active students give peer pressure as a reason for sexual initiation in Silish’s study. Void of parental control and supervision, relative freedom in the university, peer pressure, personal desire/love, high level of social interaction, instigating parties’ advertisement by enterprises and night clubs, lack of regular control by proctors and feelings of loneliness were reasons for students’ sexual debut after they joined university as it is reported by students who experienced sexual intercourse at the university. This result is also inline with the findings of Sigot, (2001); Saint, (2004) cited in UoG, (2005). So the relative high degree of sexual intercourse/engagement in the University may be attributed to high level of personal freedom and the permissive lifestyle prevalent in the University as it is stated by scholars.

Table 3 University of Gondar Students Sexual Debut before and after Joining University from January to June, 2010.

Variables		Count (%)
Sexual debut before and after joining university	After	154(65.25)
	Before	82(34.74)

Students perception of susceptibility of HIV/AIDS and exposition to STIs (Sexually Transmitted Infections)

From Table 4, one can notice that from the sexually active students, only 74(18.5%) of students perceived to be at risk of contracting HIV/AIDS infection. Similarly, a study done by Solomon (2009) showed low (9%) risk perception among regular students of University of Gondar. Another study conducted by Tegegn, 33% of the sexually active group felt at risk of getting HIV (Tegegn, 2009). Risk perception was also found to be low in this study. Perception of susceptibility to HIV infection was low and only 49.3% of the sexually active respondents felt that they could be at risk (Molla, 2007). Corroborating evidence also gathered from a study undertaken by Semie. Accordingly, from sexually active youth participants of this study, about 50.7% of the respondents reported they did not perceive themselves at risk of HIV despite unprotected sex and multiple sexual partnerships existence (Semie, 2000). The result from the FGDs was also in harmony with the result.

Table 4 Students Perception of Susceptibility of HIV/AIDS and Exposition to STIs, University of Gondar, January to June, 2010.

Variables		Count (%)
Feel at risk of HIV/AIDS	Yes	74 (18.5)
	No	326 (81.5)
Exposition to STIs	Yes	46 (19.5)
	No	190 (80.5)

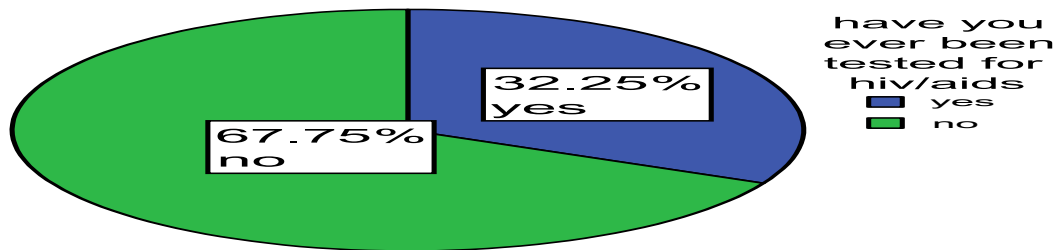
Additionally, as it is depicted in Table 4, out of the sexually active participants, 46(19.5 %) reported they ever had sexually transmitted infections. Whereas 190 (80.5%) reported they never contracted sexually transmitted infections.

A recent study made at Hawasa University has revealed nearly similar level of STIs among students 4 (18.2%) (Selish, 2009). Related evidence also verified by Tegegn. Accordingly, Out of the sexually active group 46(24.8%) reported that they had encountered at least one of the STIs symptoms during their stay in the University (Tegegn, 2009). On the contrary, in a study conducted in Morocco 40% STIs record among young people was observed. Thus, the difference between the findings in this study and the findings in Morocco may be attributed to cultural and social norm differences. In the context of Ethiopia, sexual issues/problems/infections were/are taboo to be discussed and to be reported.

Test for HIV

As it is demonstrated in Figure 1, 129 (32.2%) of the participants reported to have been tested for HIV while the remaining 271 (67.8%) of the participants delayed testing for HIV or they never have HIV test. From this figure it can be seen that majority of the University students procrastinate HIV test. Another study done in the same University nearly showed parallel result (37%), Solomon (2009). A study by Getnet (2009) also depicted equivalent result, his participants also procrastinated HIV testing. HIV test rate was also low in other countries such as Tanzania (Kan, 2002). This low rate of HIV test in Ethiopia or in other countries may be attributed to the inaccessibility of the service or the infamy (especially when clients' are sero-positive) following the blood test.

Figure 1 whether Tested for HIV/AIDS by Students of University of Gondar, January to June, 2010.



Factors associated with sexual relations/engagement among university students

As it can be observed from Table 6, variables such as Being Tested for HIV/AIDS (AOR = 4.989, 95% CI = (2.970, 8.381)), Risk Perception (AOR = 2.555, 95% CI = (1.385, 4.713)) and Money and Gift (AOR = 4.507, 95% CI = (1.623, 12.518)) were found to be statistically significant.

Table 6 Adjusted Binary Logistic Regression Output of the Determinant Factors of the Sexual Behaviors of Students of University of Gondar, January to June, 2010.

Variable		Ever Had sex		COR (95% CI)	AOR 95% CI
		Yes	No		
Religion	Orthodox	171	139	0.289 (0.095, 0.880)	0.271 (0.085, 0.868)
	Muslim	20	9	0.523 (0.136, 2.004)	0.467 (0.113, 1.930)
	Protestant	28	12	0.549 (0.152, 1.979)	0.513 (0.133, 1.982)
	Others	17	4	1	1
Tested for HIV/AIDS	Yes	105	24	4.676 (2.826, 7.735)	4.989 (2.970, 8.381)
	No	131	140		
Perceived risk	Yes	56	18	2.523 (1.421, 4.481)	2.555 (1.385, 4.713)
	No	180	146		
Dressing style	Yes	54	53	0.621 (0.398, 0.971)	0.682 (0.418, 1.113)
	No	182	111		
Money and gift	Yes	25	5	3.768 (1.411, 10.059)	4.507 (1.623, 12.518)
	No	211	159		

The odds of having sexual intercourse were nearly 5 times higher among those students who had been tested for HIV/AIDS than those who had not. This may be attributed to strong sense of invulnerability for those sero-negative students or feelings of hopelessness for those sero-positive students.

The odds of having sexual intercourse were 2.6 times higher among students who perceived themselves at risk of getting HIV/AIDS than those who did not perceive. This may be because students who felt that they are at risk of getting HIV/AIDS would continue having sexual inter-course susceptible to the pandemic.

The odds of having sexual intercourse were 4.5 times higher among students who thought money and gift as factor for sexual engagement than those who did not thought it as a factor.

On the other hand, though the regression analysis doesn't show significant association with some of the variables, peer pressure, lack of supervision, less stingy control and relative freedom in the campus, proliferation of technological out puts like mobile phone, phone pornographic films and video pornographic films, dressing style, alcohol consumption/use, money and other gifts, sexually appealing advertisements lunched in the vicinity of the University for students to attain parties, and personal desire/love are factors mentioned by participants of the FGDs for sexual engagement. Furthermore, the group discussant cited that less risk perception among students as major factor for sexual engagement.

Efforts made by the university to prevent students from HIV/AIDS

The university has established anti-HIV/AIDS clubs in all the three campuses. Additionally the university provides VCT service in the university hospital. Moreover, the university organizes various ant-HIV/AIDS movement/events as it is reported by the official. The presence of the services was confirmed by some of the students of the University; while a few students mentioned that they knew little about the University efforts to prevent them from HIV/AIDS. As reported by the official condom distribution, training on RHPs including HIV/AIDS for proctors, inter-department sport festival, were also among the efforts made by the University to prevent students from HIV/AIDS. Finally, promotion activities on the way to cafeteria about HIV/AIDS and establishment and arrangement of various in door games like chess were also stated as prevention efforts by the official.

Pertinent strategies that are applicable to university students

Banning, advertisements of parties in the University campus, incorporating HIV/AIDS into curricula, establishing and initiating voluntary counselling and testing center in each campus, involvement of students living with HIV/AIDS in the prevention effort, the voluntary strict/regular supervision of students at University, regular follow up of anti-HIV/AIDS clubs, social support for students being tested for HIV/AIDS regardless of the status of the VCT, orientation for students about university life and HIV/AIDS in the university, training on VCT, acceptance of safe sex instead of considering it as taboo and pointing fingers towards couples', life skill trainings, and setting some rules on dressing style were some of the strategies mentioned by University students and the official as a strategy to slowdown the rate of the pandemic in the university.

CONCLUSIONS AND RECOMMENDATIONS

More than half of the students are already sexually active; many of them were indulged in risky sexual behaviours like unprotected sex, multiple sexual partnership, sex with Commercial Sex Workers, sex for money and other valued resources and inconsistent condom use; however a few respondents perceive themselves as being at risk of HIV acquisition.

So the researchers recommended that efforts ought to be extended by concerned bodies such as Governmental and Non Governmental Organizations that are working with the universities so as to expand Health Education, strengthening Anti-HIV/AIDS clubs and VCT centers within the jurisdiction of Universities to reverse risky sexual behaviors and illusion of invulnerability of HIV/AIDS of students through emphasizing on pertinent strategies that are applicable to them.

REFERENCES

- Assefach Haileassie (2007): *Survey of Present Situation of Orphan and Vulnerable Children (OVC), Major problems and priorities*. A paper presented in 6th National conference of Ethiopian psychologist Association.
- Eyob, Kebede.(1999): *Background, projections, impacts and Interventions HIV/AIDS*. Addis Ababa, Ethiopia.
- Getnet Tizazu (2009). Self reported sexual engagement of Ethiopian undergraduate students in the context of HIV/AIDS pandemic
- Haile Gebreyeus (2006): *HIV/AIDS prevention Education at Mekelle University in Ethiopia: Existing and Ideal curriculum*. Master's Thesis, University of twenty. Enschede. The Netherlands.
- Helen J (2002). *Continent in crises. AIDS in Africa*.
- Kan,M (2002). *KAP study on voluntary counseling and testing In Burkinafso*.
- Molla Tefera (2007). *Prevalence of Risky Sexual Behavior and Associated predisposing factors to STIs/HIV/AIDS infection among in School and out of School Youth in north Gondar Zone*. Master's Thesis.
- O'lear,E.(2002). *Beyond condom: Alternative approaches to HIV prevention*. New York.
- Ostrow, D. (1999). *Behavioral aspects of AID*. New York.
- Semie, A(2000). Association of Drug use and Client sero-status among visitors of VCT sits in A.A. Un published Master's Thesis.
- Sigot, A.J.(2001): *Workshop on women higher education science, Africa universities Responding to HIV/AIDS*. International center for research in agro forestry (ICRAR).
- Sileshi Hielmeskel (2009). *Pre-marital sexual practice and contributing factors among female students of Hawasa University*. MPH thesis. Unpublished.
- Solomon, M. (2009). *A Comparative Cross Sectional Study on the Determinants Of VCT Services Utilization Between The Health And Non Health Related Students Of University Of Gondar, North West Ethiopia*.MPH thesis. Unpublished
- Tegengn Shiferaw (2009). *Sexual and reproductive health risks/problems of students of Adama University*. MPH thesis Unpublished
- UNIDS (1998): *HIV/AIDS Fact sheet*.
- UNICEF (2002): *Young people and HIV/AIDS, opportunity in crisis*.
- UOG (2005): *Mainstreaming HIV/AIDS prevention, treatment, care and support program in the University of Gondar*. University of Gondar.
- World Bank (200). HIV/AIDS
- Zebideru Zewdie (2005). *Assessment of HIV risk perception and condom use among youth in Deber Birahan town*. MA thesis. Unpublished