ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES SCHOOL OF NURSING AND MIDWIFERY POST GRADUATE PROGRAM

ASSESSMENT OF LEVEL OF HIV/AIDS PREVENTIVE SELF-EFFICACY AND ASSOCIATED FACTORS AMONG REGULAR UNDERGRADUATE STUDENTS OF MADDA WALABU UNIVERSITY, SOUTHEAST ETHIOPIA, 2020.

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Full title of the research	Assessment of Level and factors associated with HIV/AIDS Preventive Self-efficacy among regular undergraduate students of Madda Walabu University, Southeast Ethiopia, 2020.
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ABBREVIATIONS AND ACRONYMS

United States Agency for International Development (USAID)

United Nations Children's Fund (UNICEF)

Self –efficacy Assessment (SEA)

Statistical Package of Social Science (SPSS)

Addis Ababa University (AAU)

Madda Walabu University (MWU)

Tikur Anbessa Specialty Hospital (TASH)

Standard Deviation (SD)

Confidence Interval (CI)

Crude odds ratio (COR)

Adjusted odds ratio (AOR)

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ABSTRACT

Background: Self-efficacy related to the individuals' beliefs in their abilities to have more control over their motives, behaviors, and most importantly, over their social environment. It is strongest predictors for HIV prevention. However, there were limited evidences on level of HIV/AIDS preventive self-efficacy and factors associated, among undergraduate students of Ethiopia generally and in the study area particularly. **Objective:** To assess level of HIV/AIDS preventive self-efficacy and associated factors among regular undergraduate students of Madda Walabu University, Southeast Ethiopia, 2020. **Methods:** An institution based cross sectional study was conducted from February 15 to 20, 2020. Single population proportion formula was used to calculate the sample size. After adding 15% of non-response rate, the final sample size was found to be 442. Simple random sampling technique was implemented to recruit the participants. Pre-tested self-administered questionnaire was used to collect the data. Data were entered into EpiData version 4.6.0.2 and analyzed using SPSS version 26 software. Bivariate and multivariable logistic regression model was fitted to identify factors associated with HIV/AIDS preventive self-efficacy. Odds ratio with 95 % confidence interval was computed to determine the level of significance. **Result:** The mean level of HIV/AIDS preventive self-efficacy among regular undergraduate students of Madda Walabu University was found to be 74.58±19.98. Being female [AOR=1.76(1.04-2.81)], in field of health science [AOR= 1.92(1.10-3.36)], in second year of study [AOR=2.77(1.55-4.94)] and drinking alcohol [AOR=2.9(1.61- 5.23)] were found to be factors associated with higher HIV/AIDS preventive self-efficacy. Whereas, exposed to pornography [AOR=0.53(0.33-0.85)] was found to be factor associated with lower HIV/AIDS preventive self-efficacy. **Conclusion and Recommendation:** The mean HIV /AIDS preventive self-efficacy of the participants in this study area was found to be low. Sex, field of study, year of study, drinking alcohol and ever had watched pornography were factors found to be significantly associated with HIV/AIDS preventive self-efficacy. The study found more than half of the participants (51.4%) were knowledgeable about HIV/AIDS. However, the finding showed significant number of participants involved in risk behaviors. All staff should be cooperative in educating their students to boost their self-efficacy.

Key words; HIV/AIDS, University Students, Self-efficacy

1. INTRODUCTION

1.1 Background

Self-efficacy concept derived from Bandura's social-cognitive theory, which considers that individual's insights of their own capabilities play a key role in changing their behaviors, motivations and experiences (1). While, perceived self-efficacy concerned with people's beliefs that they can exert control over their own motivation, thought process, emotional states and pattern of behaviors (2).

HIV/AIDS has become one of the most devastating disease humanity has ever faced. Although the threats of HIV/AIDS spread all over the world, the adolescent are progressively recognized as a group at high risks of exposure and a main concern on the global and national HIV policies(3). Among an investigator looked at self-efficacy and AIDS, Albert Bandura included self-efficacy as one of the crucial components in learning effective behavior for dealing with the AIDS crisis since many students engage in high risk sexual behavior even when they know of the risks. As he believed, enhancing self-efficacy for reducing HIV/AIDS-related risk behaviors is so good and a critical element for HIV preventive programs among adolescence(4).

Self-efficacy for HIV prevention described as a person's belief in his/her capacity to carry out necessary actions to perform a specific behavior for HIV prevention. It enhances sense of personal power to exercise control over risky situations and being strongest predictors for HIV prevention. Therefore, strong levels of self-efficacy for HIV prevention influence personal change toward HIV prevention behaviors(5). Increasing level of self-efficacy has been considered as a valuable strategy for changing behaviors and increasing personal control over the prevention of risk-taking behaviors towards HIV/AIDS infection(4)

In this context, HIV/AIDS Preventive self-efficacy was considered as the perception that undergraduate students can engage in protective behaviors to prevent the HIV/AIDS infection through ability to say no to sexual intercourse under different circumstances, ability to ask partner about previous sexual relations and other risk behaviors such as drug use, and ability to acquire and correctly use condoms (6)

1.2 Statement of the problem

In 2018 alone, 510,000 adolescents below the age of 24 were newly infected with HIV worldwide(7). The case in Sub-Saharan Africa seems serious in which accounted for 89% of adolescents living with HIV /AIDS in which girls were being newly infected with HIV at four times the rate of adolescent boys(8). As UNICEF report shows ,the new HIV infections among adolescents are projected to rise from 250,000 in 2015 to nearly 400,000 annually by 2030 if progress in reaching adolescents stalls (7).

The new infections are highly concentrated among people of 15-24 years of age group in many region of the world in which by default this is the age in which most of university and college students are found in(9). University students are very mobile group, and if not protected and preserved from the scourge of HIV and AIDS, they can become dispersal agents for the spread of HIV in society (10). They are at higher risk of engaging in risky sexual behavior, especially if they are under the influence of alcohol or drugs, misconception on HIV and AIDS mode of transmission and its severity or lack the necessary maturity in handling negative peer pressure(11). On average, in Ethiopia 30% of university students, both male and female were sexually active and suffering from complications of unsafe sex such us STI including HIV and abortion(12).

Since HIV/AIDS is a main public health, social, economic and developmental challenge, HIV related education is exceptionally situated within the community to support appropriate and sustainable change. For this reason, university-based HIV-prevention programming is considered as an effective step in protecting the general population from further infection (13), while preventing the transmission and the acquirement of the virus among university students must focus upon increasing self-efficacy and bringing behavioral changes(14).

In point, students with lower self-efficacy have less control over their lives and are more likely to be subjected to high-risk behaviors. He/she feel powerless and think that he/she is unable to control his/her life events. In sum, low self-efficacy of the students can destroy their motivation, interfere with cognitive abilities and increase the possibility of high-risk behaviors and vulnerability for HIV infection(15).The study found students with low condom efficacy had a higher risk of inconsitent condom use with a new sex partner(16)

Hence, keeping in mind high-risk behaviors of universıty students and their potential risk for all society, whether or not they are sexually active, assessing their preventive self-efficacy regarding HIV/AIDS may be helpful in identifying their potential ability to engage in risk reduction behaviors. Besides these, little was known about HIV/AIDS preventıve self-efficacy among Madda Walabu university students. Thus, this study was aimed to assess level of HIV preventive self -efficacy and associated factors among undergraduate regular students of Madda Walabu University, Southeast Ethiopia, 2020.

1.3. Significance of the study

University students are critical to the socio-economic fabric of communities and nations, therefore, protecting them from HIV is essential. Self-efficacy of these students concerning HIV/AIDS is the main variables for social development of a society and country at large.

Competent and efficient professionals and personnel can be produced if university students get help and support during their stay at the university in relation to HIV/AIDS self-efficacy problems. Students with high self-efficacy have more confidence in their abilities and little distrust about themselves and consider the problems as a challenge not a threat and actively search for new situations.

Studying self-efficacy of the students regarding HIV/AIDS will be used in promoting HIV/AIDS prevention, intervention, and control in university level. The finding from this study will help university managements to now their student's status and implement certain actions like giving health education and short training for their students regarding this infection as practice. It will also be essential for policy formulation and revision concerning HIV/AIDS services at large. Furthermore, the finding of this result will be used as a base line data for health professionals and other interested professionals who are going to conduct further study on this area in university level and communities at large, after it will be published on scientific journal.

2. LITERATURE REVIEW

2. 1. The Concept of Self-efficacy

The general concept of self-efficacy assesses a comprehensive and stable sense of personal competence to deal effectively with a variety of stressful situations like; nutritional related or dietary, physical exercise, alcohol consumption (controlled drinking, drinking refusal and abstinence), smoking cessation , adherence to medication and rehabilitation, condom use, detective behaviors and self-efficacy(17) and HIV/AIDS preventive self-efficacy.

Self-efficacy considered as individual's ability to perform, determines whether behavior will be initiated, how much effort will be exhausted, and whether the effort will be continued(18). Efficacious individuals welcome challenging tasks as motivating factors, while individuals with inefficacious belief dwell on their deficiencies when faced with difficulties(19). Furthermore, according to these concept, when people lack a sense of self-efficacy, it believed as they do not manage situations effectively even though they know what to do and possess the requisite skills(2).

2.2 HIV /AIDS Preventive Self-efficacy

The study conducted on university of Turkey (n=507) using the last version of HIV/AIDS preventive self-efficacy scale composed of 27 items reported, the students' mean level of HIV/AIDS preventive self-efficacy score as 87.66 (SD±23.94). The study found more than half of the participants (52.7%) were sexually active in which 65.1% of them were males and 16.7 % them were females. The mean age for the first sexual intercourse was 17.6±2.00 years of age for males and 19.0±1.35 years of age for females(6).

Similar study conducted among Taiwanese adolescents using HIV/AIDS preventive self-efficacy scale composed of 22 items distributed into three dimensions: refusing sexual intercourse (items 1 to 9), questioning potential sex partners (items 10 to 13), and condom use (items 14 to 22). The mean HIV/AIDS preventive self-efficacy among 734 participants was found to be 74.45(SD± 17.05). This study reported mean score of 30.67 on the dimension of refusing sexual

intercourse, 15.03 on the dimension of questioning potential sexual partners and 33.42 on the dimension of condom use. Of 734, only 35 participants were very sure or sure in their abilities to perform all HIV/AIDS preventive behaviors asked in the questionnaire while most participants were uncertain about their abilities to refuse having sexual intercourse with someone who they already had sexual intercourse with, who they want to fall in love with, and who they have dated for a long time (20).Furthermore, study conducted on 962 Mexican adolescents assessed by HIV/AIDS preventive self-efficacy scale of 27 items found that a mean HIV/AIDS preventive self-efficacy were 95.14(SD ± 25.80)(21).

Related study conducted on total of 1,179 (60.3%) Ugandan university students found, 231 (37.4%) males and 209 (49.2%) females reported inconsistent condom use with a new sex partner(16). Other related study conducted among 576 students of Debre Berhan University found 36.5% of students were sexually active. Of these, 53.4% reported using condoms during sexual intercourse and 55.6% of them used condoms irregularly(22). Whereas, among 50.4% of 707 undergraduate Wolaita Sodo university students used condom during sexual intercourse in the last 12 months, only 33.2% used condom consistently(23).Further study conducted among Wollega university students reported , about 46.1% of students were at high risk of getting HIV infection and only about 61.3% used condom consistently with non-regular partner. The mean age of sexual debut was 17.5(±2.21) and 16.9(±3.10) years for males and females respectively (24). These indicates that condom use was linked with HIV preventive self-efficacy.

According to study conducted on 602 undergraduate students of Addis Ababa university, 161 (26.8%) had sexual contact and the mean age of first sexual encounter was 17.4 years. Among sexually active students, 74 (46%) had not used condom during first time sex. The overall mean score of knowledge of students towards risk perception on HIV was 66% (25). Study conducted among 817 students of Bahır Dar university found that only 45.7% students were knowledgeable towards HIV/AIDS(26). Similar study conducted on undergraduate students of Madda Walabu university reported, (49.37%) of students were knowledgeable (27). However, HIV Knowledge does not always predict condom use self-efficacy. As study done on Hispanic youths reported there was no statistically significant association between HIV knowledge and condom use self-efficacy, $p > 0.05$(28).

2.3 Factors associated with HIV/AIDS Preventive Self-efficacy

Although, many factors influence preventive self- efficacy of the students, some socio-demographic factors like (sex, origin of the residence, students monthly income from the parent or relatives , field of study and being sexually active), students' believes and risk behaviors were found to be factors associated with students HIV/preventive self-efficacy as previous studies on HIV/AIDS preventive self-efficacy and related shows(6)(20)(23)(25)(26)(29)(30)(31) (32)(33).

2.3.1 Socio-demographic characteristics

Study done on Turkey university students found that female students had higher HIV/AIDS preventive self -efficacy ($p<0.01$) compared to male students (6). In similar study conducted on Taiwanese adolescents, female had higher HIV/AIDS preventive self-efficacy (adjusted mean = 87.68±14.08) than those of the males (adjusted mean = 74.02±17.07). In specific items both sexes reported that they had lower self-efficacy to refuse sexual intercourse with someone "whom they have already had sexual intercourse" and "whom they want to fall in love with." On the other hand male participants showed lower self-efficacy on the items "say no to sex with someone who pushed them to have sexual intercourse" and "say no to sex with who they wanted to date again,". Female adolescents were found to have less self-efficacy to "walk into a store and buy condoms" and to "use condoms during sex after drinking alcohol(20). According to related study done among students at Makerere University Kampala, Uganda, males were more likely to ever use a condom (63% vs. 55%) than females (29).

Students from urban residents were 8.3 times more likely to use condom consistently than those from rural areas and who reported to have higher monthly income were 6 times more likely to use condoms consistently than their counter parts (23). Similarly in other study, a significant correlation in the positive direction was found between the self-efficacy scale score and income level ($p<0.001$) in study conducted on Turkey university students(6)

Study done on university found that students involved in health field had higher HIV/AIDS preventive self-efficacy compared to their encounter parts($p< 0.010$)(6). Related study done on undergraduate students of Addis Ababa university found that students those enrolled in health

science departments had almost three time more knowledge towards HIV risk reduction strategies than students in non-health related departments(25).

The study conducted in Turkey university revealed that students those who were not sexually active ($p<0.01$) had higher HIV/AIDS preventive self-efficacy compared to their encounter part (6).Similar study conducted on Taiwanese adolescence revealed that the average HIV/AIDS preventive self-efficacy scores among participants who never experienced sexual intercourse were significantly higher than those who had sexual intercourse (20).In related study among South African university students, males were 2.7 times more likely to be sexually active and 3.3 times at higher risk of having two sexual partners than females indicating low HIV preventive self-efficacy(30).

2.3.2 Believes

Among female respondents, believes like; knowing how to avoid, having spoken with someone other than a parent or guardian about HIV/AIDS and having life goals were factors associated with high self-efficacy and not using condoms during their first sexual encounter, a history of unwanted sex and believing that condom use implies distrust in one's partner were factors associated with low self-efficacy. Whereas , among males, believe like; getting condoms easy and to have life goals were associated with high self-efficacy and believing in condom use as sign of not trusting one's partner was factors associated with low self-efficacy(31). According to related study conducted among 817 Bahir Dar university students, (19.6%) believes that the use of condom during sexual intercourse is an insult to their partner(26) So, according to these studies believe of the students linked with level of HIV/AIDS Preventive self-efficacy.

2.3.3 Behaviors

Even though, there were scarcity of studies which shows association of student's risk behaviors and decreasing HIV/AIDS preventive self-efficacy, it is obvious that the preventive self-efficacy of the students probably decreases as the students engage themselves in risk behaviors. Related. study done in Turkey on risk behaviors associated with HIV/AIDS among university students in Konya reported; 4% of the students having unprotected sex (sex without condom); 2.4 % had unprotected sex more than 1 sexual partner; 1.4 % had unprotected sex with someone whose HIV

status is unknown; 2.8 % had sex with sex workers, and 2.8% had sex under the influence of alcohol(34).Similar study done on adolescence of Taiwanese supported this idea in which students who had a history of substance use had significant lower HIV/AIDS preventive self-efficacy than those who had never used a substance (20). Other related study conducted on predictors of HIV prevention knowledge and sexual behaviors among students at Makerere University Kampala, Uganda found 6.0% of 1337 participants reported being drunk at their last sexual intercourse(29)

Similarly, Ethiopian university students were reported to be engaged in different risk activities which facilitate the infection to increase. A cross-sectional study conducted on Debre Berhan University reported that from 557 of students', 140 (25.13%) reported having at least one risky sexual behavior in their lifetime in which cigarette smoking and pornography exposure shows significant association with risky sexual behavior (35). Other qualitative study carried out in higher educational institution of Ethiopia revealed that substance abuse and addictions, early initiation of sex, and exposure to pornography were reported as a problem for the infection increases(32). Furthermore, study found that characteristics of university students like; their age, ambition, experience of new events(24), and other contextual driving factors, increase their exposure to HIV/ AIDS (36).

Related study done on among regular undergraduate students at Bahir Dar University found, having sex after alcohol drinking and khat chewing , watching pornography and inconsistent use of condom were the risk factors for HIV infection(33). Other related study employed on 695 Debre Berhan University found the lifetime utilization of alcohol, khat, cigarette, shisha and cannabis among students was 36.3%, 10.9%, 7.4% 4.2% and 4.5% respectively. Being male, feeding out of the university café, being from private preparatory school, having higher monthly income, having substance user families and friends were found to be variables significantly associated with students' substance use behaviors(37).

In a sense, these parallel risk behaviors were challenging student's HIV/AIDS preventive self-efficacy during their stay in universities. So, identifying their risk behaviors and working on their behavioral change is helpful in preventing the dispersion of the infection among the students specifically and societies at large.

2.4 Conceptual Framework

This conceptual framework is constructed from the literature review used, in which certain variables under socio-demographic characteristics, believes and behaviors of the student's directly related with dependent variable(6)(20)(23)(25)(26)(31).For instance, in case of sex as socio-demographic characteristics, being male was related to having lower HIV/AIDS preventive self –efficacy compared to female(6) (20).

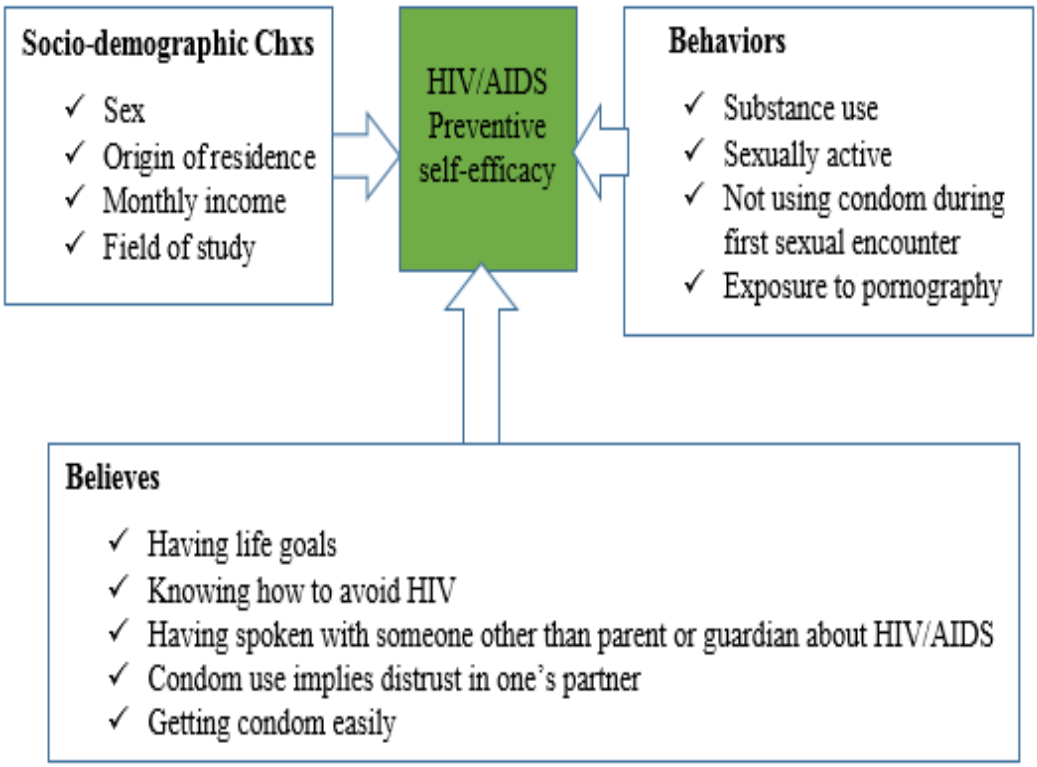


Figure 1: Conceptual framework for the Assessment of level and factors associated with HIV/AIDS preventive self-efficacy among regular undergraduate students of Madda Walabu University, Southeast Ethiopia, 2020.

3. OBJECTIVES

3.1 General objective

- ✓ To assess level of HIV/AIDS preventive self-efficacy and associated factors among regular undergraduate students of Madda Walabu University, Southeast Ethiopia, 2020.

3.2 Specific objective

- ✓ To determine level of HIV/AIDS preventive self-efficacy
- ✓ To identify factors associated with HIV/AIDS preventive self-efficacy

4. METHODS AND MATERIALS

4.1 Study design and period

An institutional cross- sectional study design was conducted from February 15 to 20, 2020.

4.2 Study area

The study was conducted in Madda Walabu University on undergraduate regular students. The university was established in 2006 and located in Bale Zone, in the town of Robe, about 430 km away from the capital city, Addis Ababa. According to the data obtained from the registrar record office, currently the university has 50 undergraduate programs, eight schools, one institute and two colleges of health sciences. It has three campuses, Robe, Goba and Shashamane College of Health Sciences. In the year 2020 the university has a total number of 9,253 regular undergraduate students (38).

4.3 Source population

All regular undergraduate students at Madda Walabu University.

4.4 Study population

Randomly selected voluntary students who attended class at data collection period.

4.5 Eligibility criteria

4.5.1 Inclusion criteria: Students who were not married and not first year.

4.6 Sample size determination & Sampling procedure

4.6.1 Sample size determination

Sample size was determined using single population proportion formula by considering the following assumption**.** After exhaustive searching, the principal investigator did not found study done on HIV preventive self-efficacy on university students in Ethiopia, therefore the following assumption was used to calculate the sample size. Considering proportion of 50%, 95% level of confidence and 5% margin of error.

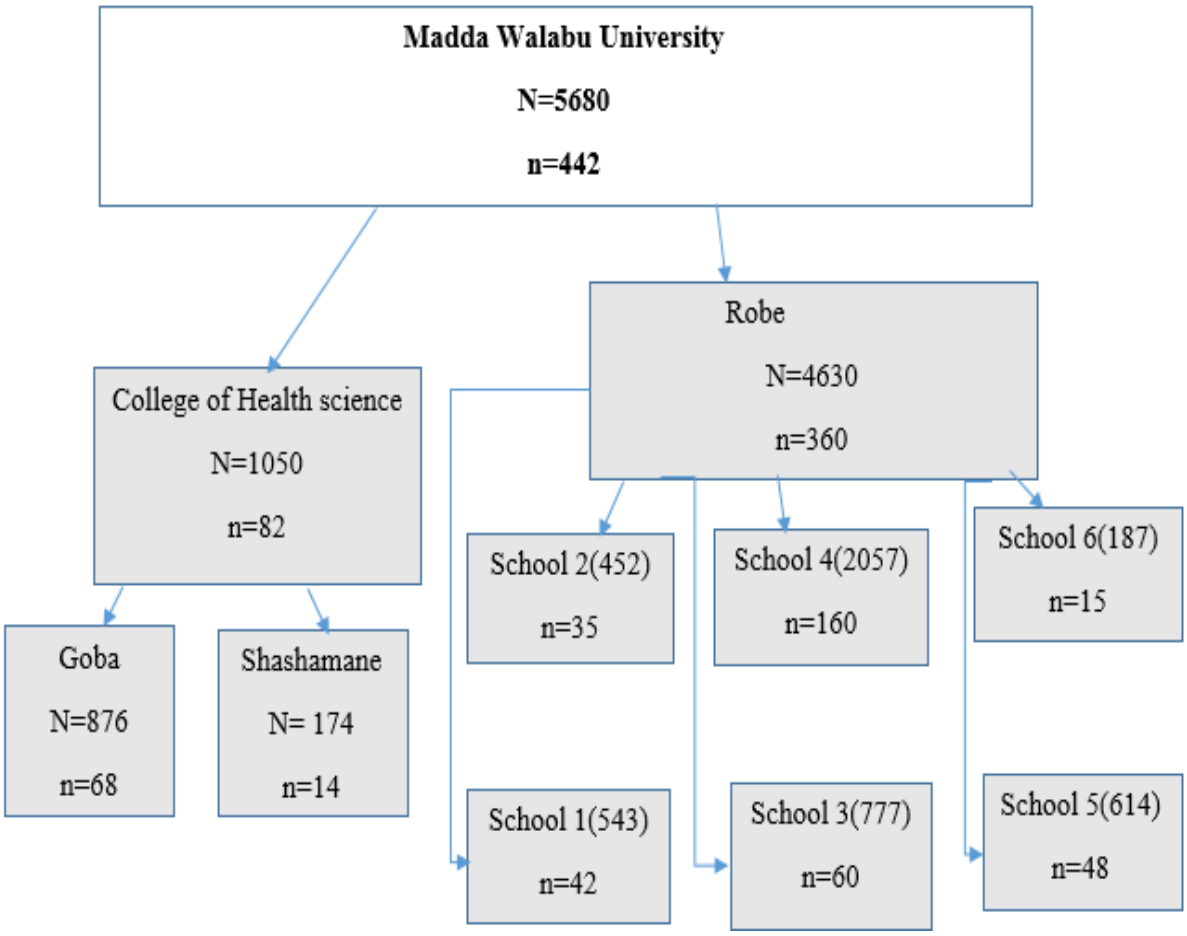
$n= (z_{\alpha/2})^2 p\ (1-p)/w^2$

- ✓ Proportion (p=50%)
- ✓ 95% level of confidence (z=1.96)
- ✓ 5%of marginal error (w=0.05) $n= (1.96)^2\ 0.5(0.5)/\ (0.05)^2=384$

After adding 15% non-response rate the final sample size was 442**.**

4.6.2 Sampling technique

First, Madda Walabu University was selected from public universities found in Ethiopia. Then the identification of the number of the campus, collages and number of students in each campus was checked from university registrar record office by principal investigator. After that samples were allocated for each campus accordingly (Goba College of health science and Shashamane, and Robe campus). Then from the total eight schools in Robe campus, six schools were selected randomly. Then students were stratified for selected schools and collages of health science. After that students were further stratified in class year under selected schools and colleges of health science. Finally, simple random sampling was implemented using students list obtained from registrar as sampling frame.



Key:

1. School 1: School of agriculture and Natural resource
2. School 2: School of Social Scıence and Humanities
3. School 3: School of Business &Economıcs
4. School 4: School of Engineering
5. School 5: School of Natural and Computational Scıence
6. School 6: School of Education and Behavioral Study

Figure 2: Schematic presentation of sampling procedure for selected Schools and Colleges

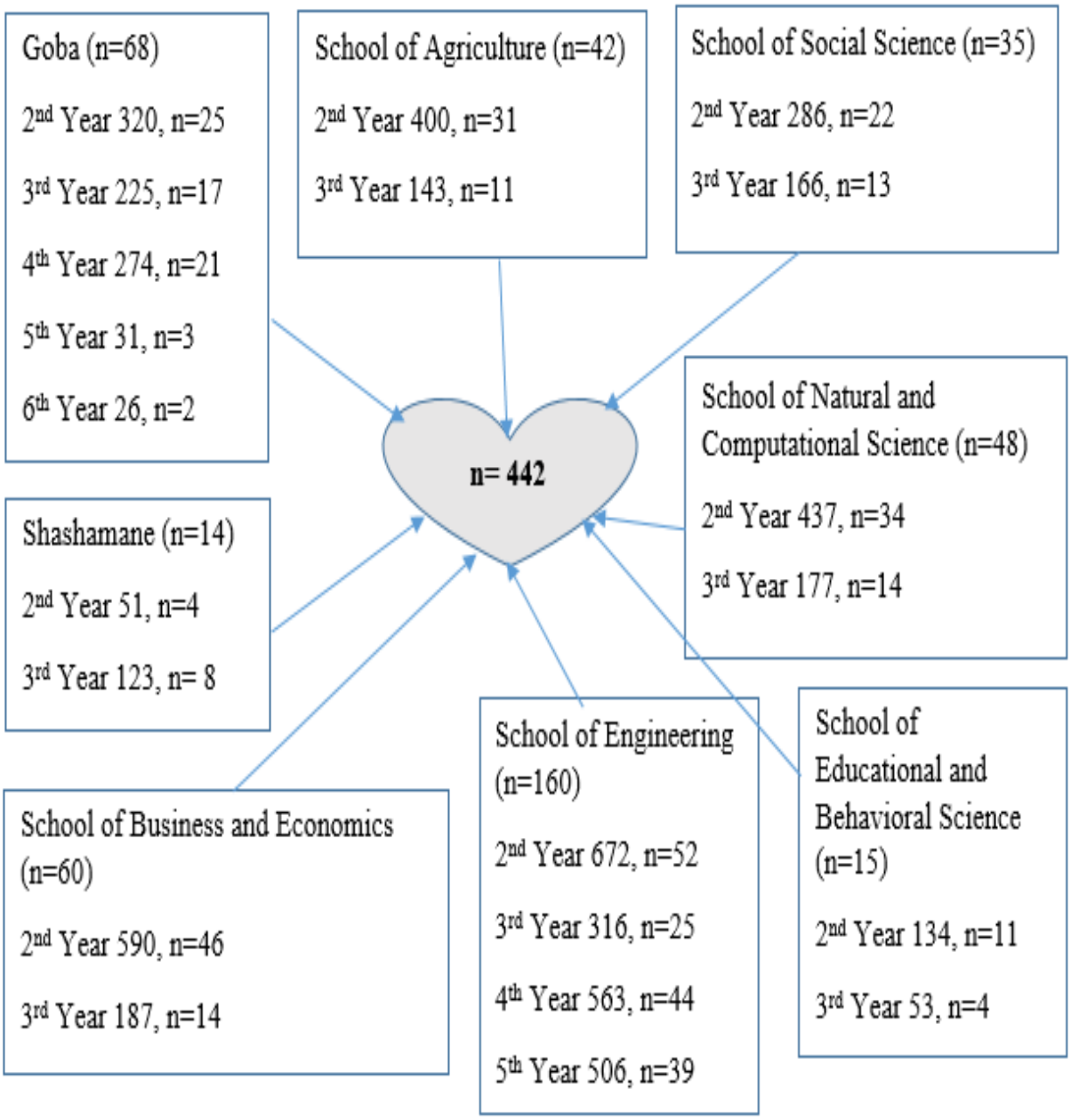


Figure 3: Allocating samples for class year under randomly selected schools and Colleges

4.7 Variables of the study

4.7.1 Dependent variable

- ✓ HIV/AIDS preventive self-efficacy

4.7.2 Independent variables

- Socio demographic characteristics variables like;
  - ✓ Sex
  - ✓ Origin of residence
  - ✓ Monthly income and
  - ✓ Field of study
- Believes variables like;
  - ✓ Having life goals
  - ✓ Knowing how to avoid HIV
  - ✓ Having spoken with someone other than parent or guardian about HIV/AIDS
  - ✓ Condom use implies distrust in one's partner and
  - ✓ Getting condom easily.
- Risk behaviors like;
  - ✓ Substance use
  - ✓ Sexually active
  - ✓ Not using condom during first sexual encounter and
  - ✓ Exposure to pornography

4.8 Operational definitions

Self-efficacy for HIV prevention was defined as a students' confidence in his/her capacity to carry out actions or behaviours necessary to prevent HIV/AIDS infection.

Good HIV/AIDS preventive self- efficacy: refers to the students who scored at least a mean score on HIV/AIDS Preventive Self-efficacy scale out of 130 points.

Poor HIV/AIDS preventive self- efficacy: refers to the students who scored below the mean score on HIV/AIDS Preventive Self-efficacy scale out of 130 points.

Believes: Students' feeling of sure towards ways of increasing HIV/AIDS preventive self-efficacy.

Risk behaviors: Various movements undertaken by the students in response to motives and in which an action will result in outcome that is not known with certainty, but the set of possible outcomes and their associated probabilities are known or can be estimated.

4.9 Data Collection Procedure

Data was collected through self administered questionnaire prepared in English language, since language of instruction in Ethiopian higher educational inistitutions is Eglish. Four diploma nurses were asigned as data collectors and three Bsc instructors were assigned as supervisors.

4.10 Data Collection Instrument

To examine HIV preventive self-efficacy among students, the SEA-27 AIDS-Prevention Self-efficacy scale was used. The scale has 27 Likert-type reactive with a five point variation, and evaluates self-efficacy with the Bandura's socio-cognitive theory, in three aspects of sex-related behavior: ability to say no to sexual intercourse under different circumstances, perceived ability to ask partner about previous sexual relations and other risk behaviors such as drug use, and perceived ability to acquire and correctly use condoms(6).

Kasen, Vaughan & Walter initially developed 22 items scale as measuring adolescents between ages 15 and 19; having high internal consistency (α= .91)(39). The scale was translated into Spanish and used with Mexican youth and high internal consistency was reported this time as well (α= .91). The scale was tested again on a large sample group of high school students and some items of the scale were modified, and the number of items was increased from 22 to 27. Internal consistency of the 27-item self-efficacy scale was found to be 0.89 in study done on Mexican Youth(21). In this study, the last version of the Self-Efficacy scale for AIDS (SEA-27) tested on Turkey University students and reported internal consistency of 0.93 was used (6). Yet; one question from item two which asks about homosexual was excluded in this study because of sensitivity of the issue in Ethiopian context.

Believes assessment tool was developed from literatures(26)(31). In addition, the tool for assessing risk behavior was adopted from literature reviewed pertinent to the topic (40)(24) and from standard questionnaires designed by Family Health International for Behavioral Surveillance Survey(BSS) on high-risk behavior for HIV-1 , used in Addis Ababa (41) and modified. The tool for assessing level of HIV/AIDS knowledge was adopted from two literatures pertinent to the topic, with internal consistency reliability analysis of HIV-KQ (N=1033) (α= .91) (42) and internal consistency reliability as measured by Kuder–Richardson Formula 20 (KR-20) (α= 0.58) (n=483) and test-retest 0.59(n=39) (43).

4.11 Data quality assurance

Before the actual data collection, pretest was done in 5% of the sample size in non-selected department of MWU, in order to check the clarity of the tool and time needed for filling the questionnaires. Depending on result from pretest, certain changes on words and sentences were made, and time needed for filling the questionnaires was allocated appropriately in which it took 10-15 minutes. Training was provided for data collectors and supervisors on general view of the projects and how to collect the data which took one and half hour in length. Through the course of data collection, the data collectors were supervised and there was regular phone contact between principal investigator, supervisors and data collectors to know the data collection progress. Incomplete data were discarded and considered as non-response. The data was said to be incomplete when half of the items in each sections were not filled. Therefore, twelve questionnaires were discarded based on this criterion. Finally, the collected data was reviewed and checked for full completeness before data entry.

4.12 Data processing and Analysis

The data was entered to Epi Data 4.6.0.2 and coded. After that it was exported to SPSS version 26 and cleaned before analysis. Descriptive statistics was calculated for the variables. Statistical significance and strength of the association between independent variables and outcome variables was measured by using logistics regression model. A variable P value less than 0.2 and important variable like level of knowledge was transferred to multivariable logistics regression model to adjust confounder's effects. A p value less than 0.05 was considered as significantly associated. Crude and adjusted odds ratios with their 95% confidences intervals was calculated.

Finally, the result of the study was presented using tables, graph, figures and texts based on the data obtained.

4.13 Ethical consideration

Ethical clearance was obtained from AAU, school of Nursing and Midwifery Department of Midwifery Institutional Review Board. And then a formal letter of cooperation was obtained. Permission was obtained from Madda Walabu University Management and respective schools. After explaining the purpose of the study, the data collectors obtained voluntary written consent from each study participants. To protect students' confidentiality and increase chances of releasing honest information, questionnaires was kept anonymous and class were designed as students were never read over others' shoulder. Personal identifiers were not included.

4.14 Dissemination plan

After presenting the final result, the thesis will be submitted to AAU, TASH Department of post graduate in Maternity and Reproductive Health. Copy of the document will be submitted to MWU as an input data for further finding and formulating relevant program in planning and used for promoting HIV/AIDS prevention, intervention, and control. And also further effort will be applied to publish on scientific journal.

5. RESULT

A total of 442 study participants participated in this study yielding a response rate of 97%, whereas the remaining 3% non-responses rate were due to incomplete data.

5.1 Socio-demographic characteristics of the respondents

Most of the participants 308 (71.6%) were Oromo by ethnicity followed by Amhara 73 (17.0%). Mean age of the participants was 21.93(SD± 1.91) with range of 18 to 28. Majority 393(91.4%) of participant were between age of 18-24. Of total respondents, 290(67.4%) were male, 314(73.0%) belongs to non-health field of study, 173(40.2%) were year III students and 63(14.7%) of them were in sexual relationship (Table 1).

Table 1 : Socio-demographic characteristics of the regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020.

Variables	Frequency	%
Sex		
Female	140	32.6
Male	290	67.4
Age		
18-24	393	91.4
>=25	37	8.6
Marital status		
Single	367	85.3
In sexual relationship	63	14.7
Origin or residence		
Urban	225	52.3
Rural	205	47.7
Religion	199	46.3
Orthodox		
Muslim	103	24.0
Protestant	113	26.3
Other*	15	3.5
Ethnicity		
Oromo	308	71.6
Amhara	73	17.0
Tigrean	14	3.3
Other**	35	8.1
Field of study		
Health science	116	27.0
Non- health science	314	73.0
Year of study		
II	119	27.7
III	173	40.2
IV and above	138	32.1
Monthly income from family or relatives in birr.		
<300birr	96	22.3
>300 birr	278	64.7
Don't remember	56	13.0
Preparatory school accomplishing		
Governmental	354	82.3
Non-governmental	76	17.7

Key: Other* Waqeffatta, Catholic, Adventist
Other** Sidama, Sheka, Woleytta, Silte, Sumale

5.2 Believe of the respondents on HIV /AIDS preventive self-efficacy

Three-fourth of the participants 326 (75.8%) believed that person who had more knowledge on HIV/AIDS have high preventive self-efficacy than person with low knowledge. Being followed by statement, having life goal increase HIV/AIDS preventive self-efficacy of the students, 315(73.3%). And half proportion 215(50%) of the respondent answered 'yes' to the statement condom use implies distrust/insult in one's partner (Table 2).

Table 2: Believe on HIV/AIDS preventive self-efficacy among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February15-20/2020.

Variables	Options	Fre	%
Do you believe that during stay in university, having life goal increase HIV/AIDS preventive self-efficacy of the students?	Yes	315	73.3
	No	115	26.7
Do you believe that person who had more knowledge on HIV/AIDS have high preventive self-efficacy than person with low knowledge?	Yes	326	75.8
	No	104	24.2
Do you believe that having spoken with someone other than parent or guardian about HIV/AIDS increase HIV/AIDS preventive self-efficacy?	Yes	266	61.9
	No	164	38.1
Do you believe that condom use implies distrust/insult in one's partner?	Yes	215	50.0
	No	215	50.0
Do you believe that getting condom easily increase HIV/AIDS preventive self-efficacy?	Yes	257	59.8
	No	173	40.2

5.3 Risk behavior of the respondents

As the below table shows, regarding substance use 100(23.3%), 78(18.1%) and 45 (10.5%) participants had drinking alcohols, chewed chat and smoked cigarette respectively. During staying in campus 57(13.3%) participants had tried different ranges of drugs in which 22(5.1%) tried cocaine, 20(4.7%) tried shisha/gaya and 15(3.5%) had tried hashish (Table 3).

Table 3: Substance use risk behaviors for having HIV/AIDS among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020.

Variables	Frequency	%
Had smoked cigarette		
Yes	45	10.5
How often you smoked		
Everyday	7	1.6
At least once a week	25	5.8
Less than once a week	8	1.9
Don't remember	4	0.9
No response	1	0.2
Chewed chat		
Yes	78	18.1
How often you chewed		
Everyday	25	5.8
At least once a week	24	5.6
Less than once a week	13	3.0
Don't remember	10	2.3
No response	6	1.4
Drinking alcohols		
Yes	100	23.3
How often you drinking alcohols		
Everyday	1	.2
At least once a week	41	9.5
Less than once a week	27	6.3
Don't remember	27	6.3
No response	4	.9
Tried to use different range drugs		
Yes	57	13.3
Types of drugs		
Shisha/Gaya	20	4.7
Hashish	15	3.5
Cocaine	22	5.1
Go to night clubs		
Yes	37	8.6
How often you go to clubs		
Everyday	4	.9
At least once per week	13	3.0
Less than once per week	10	2.3
Don't remember	8	1.9
No response	2	.5

As showed by the below figure, among the total respondents, around 262(60.9%) were ever had tested for HIV in which 95(22.1%) test was done more than a year ago (Figure 4).

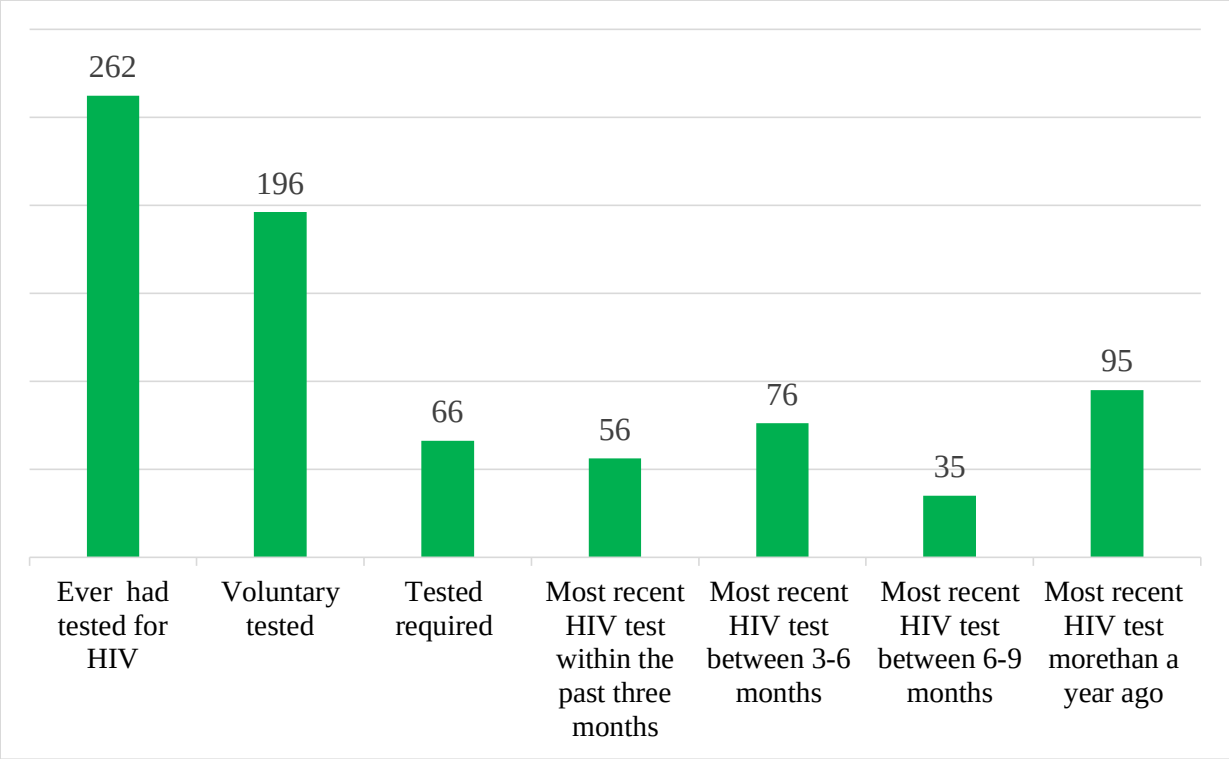


Figure 4 : Number of participants ever tested for HIV, types of test and duration of most recent test done at Madda Walabu University Ethiopia February 15-20/ 2020 (N=430).

Even though 160(37.2%) respondents were sexually active, yet only 30(7%) of the participants were used condom in their first sexual contact. The mean age at first sexual intercourse of the participants were 18.21 ± 2.113, in which it was 18.55± 2.11, 17.28± 1.89 for males and females respectively. Regarding sexual partners, 42(9.8%) participants ever had more than two sexual partners in their lifetime's and 11(2.6%) had more than two current sexual partners. Among participants ever had sexual intercourse, 23(5.3%) reported having sex while drinking alcohol and 13(3.0%) had sex while using psychoactive drugs (Table 4).

Table 4 : Risk sexual behaviors for HIV infection among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020.

Variables	Frequency	%
Ever had sexual intercourse		
Yes	160	37.2
Used condom in first sexual intercourse		
Yes	30	7.0
No	130	30.2
Number of sexual partner in lifetimes		
One	58	13.5
Two	34	7.9
More than two	42	9.8
Don't remember	12	2.8
No response	14	3.3
Current number of sexual partner		
One	95	22.1
Two	31	7.2
More than two	11	2.6
Don't remember	6	1.4
No response	17	4.0
Sexual contact with person greater at least 10 years old		
Yes	7	1.6
Used condom	2	.5
Not used condom	5	1.2
Sexual contact with CSW(for male only)		
Yes	5	1.2
Used condom	5	1.2
Not used condom	0	0.0
Had sex while drinking alcohol(Male & Female)		
Yes	23	5.3
Had sex while using psychoactive drugs		
Yes	13	3.0
No	417	97.0
Ever watched pornography		
Yes	167	38.8
No	263	61.2

Key: CSW; commercial sex workers

5.4 HIV/AIDS Knowledge of the participants

A total of 20 questions were used to measure level of HIV/AIDS knowledge among participants. The value 1 is given for those who answered yes (correctly) and 0 for those who answered no (incorrectly). Questions with opposite statements was recoded. The sum of these questions was obtained to range from 4 to 20 with mean HIV/AIDS knowledge of 13.60 and SD of 3.74. Of total participants, only 23 participants were answered all questions in correct manner.

As indicated in the table below, 344(80.0%), 304(70.7%) and 298(69.3%) respondents answered 'correctly' to the question that asked if condoms are 100% effective in preventing HIV, if they can get HIV from a mosquito bite and if all pregnant women infected with HIV will have babies born with AIDS respectively (Table 5).

Table 5: HIV /AIDS Knowledge among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020(n=430).

S. No	Variables	Correctly answered	
		Freq	%
1	You can't get AIDS if you have sex only once or twice without a condom.	322	74.9
2	A person can "pass" an HIV antibody test (test negative) but still be infected with HIV.	172	40.0
3	Condoms are 100% effective in preventing HIV.	344	80.0
4	Males can pass HIV on to others through their semen.	219	50.9
5	You can get HIV by sitting on the seat of a toilet that a person with AIDS has used.	326	75.8
6	Abstinence from sex and drugs is the best way for adolescences to avoid getting HIV.	240	55.8
7	You can get HIV from drinking from the same glass or water fountain that a person with AIDS drank from.	291	67.7
8	HIV can be found in semen, vaginal fluids, and blood	332	77.2
9	A person can get HIV by sharing drug needles	352	81.9
10	HIV can be found in breast milk.	302	70.2
11	Once you are infected with HIV, you are infected for life.	306	71.2
12	People infected with HIV are usually very thin and sickly	227	52.8
13	Some people have gotten HIV by swimming in the same pool as someone with AIDS.	291	67.7
14	You can get HIV from a mosquito bite.	304	70.7
15	Taking a test for HIV one week after having sex will tell a person if she or he has HIV	295	68.6
16	Having sex with more than one partner can increase a person's chance of being infected with HIV	273	63.5
17	Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.	312	72.6
18	All pregnant women infected with HIV will have babies born with AIDS.	298	69.3
19	People who have been infected with HIV quickly show serious signs of being infected	299	69.5
20	A woman cannot get HIV if she has sex during her period.	342	79.5

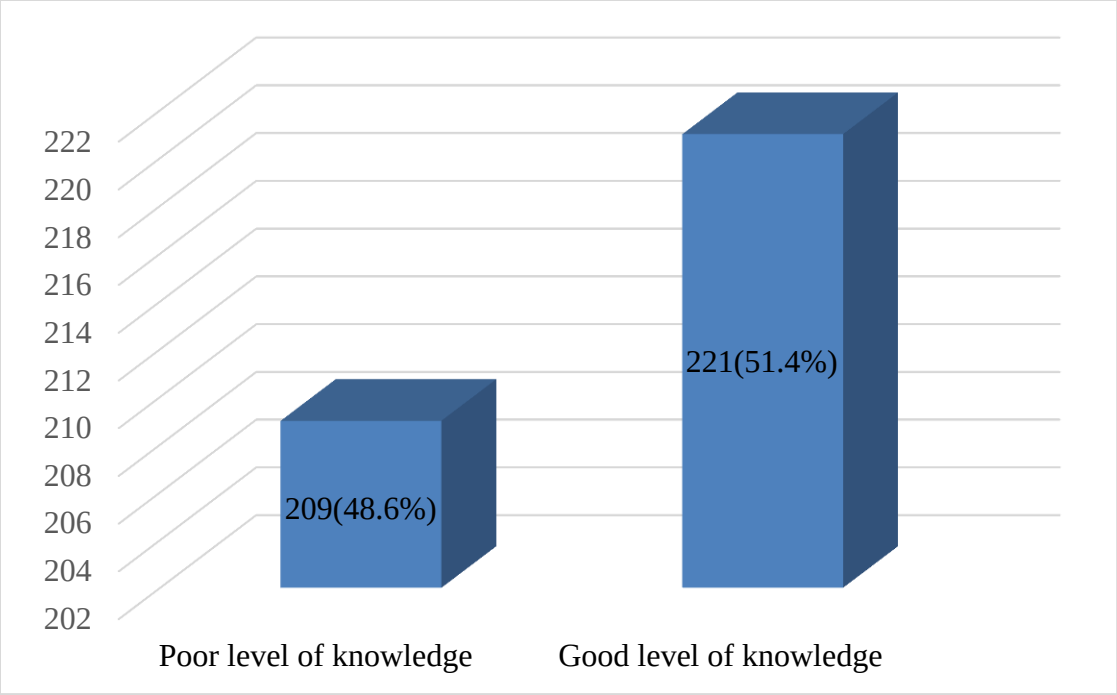


Figure 5: Level of HIVAIDS Knowledge among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/ 2020.

Students' response were considered to have good HIV/AIDS knowledge if the respondent scored greater than or equal to 13.6 (mean knowledge value) and poor if less than 13.6. As a result, nearly half 209(48.6%) of the respondents had poor level of knowledge (Figure 5).

5.5 HIV/AIDS preventive self-efficacy of the respondents

In this section HIV/AIDS Preventive self –efficacy scale with 26 items was used. The response was based on five-point scale with, 1= "not at all sure", 2 = "a little sure", 3 = "somewhat sure", 4 = "pretty sure" and 5 = "Very sure". Mean of each question was calculated with SD. The overall mean of HIV/AIDS preventive self-efficacy of the respondents were found to be 74.58 (SD±19.98) in which it was 71.38(SD± 18.01) and 81.21(SD± 22.18) for males and females respectively. The total sum for the self-efficacy ranged from 26 to 130. In this study only two participants were very sure in their abilities to perform all HIV/AIDS preventive self-efficacy (Table 6).

Table 6: HIV/AIDS preventive self-efficacy among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020.

Variables	Mean	SD
How sure are you of being able to say no when someone... suggests having intercourse		
A1…someone you've known for 30 days or less?	2.89	1.594
A2…someone whose sexual history is unknown to you?	3.04	1.474
A3…someone whose drug history is unknown to you?	3.13	1.445
A4 …someone you've known before?	3.18	1.398
A5…someone you would like to get involved with again?	3.09	1.401
A6…someone with whom you have had sex before?	3.08	1.413
A7…someone you need to fall in love with you?	3.13	1.373
A8…someone who puts pressure on you to have sex?	2.96	1.388
A9…someone with whom you have been drinking alcohol?	2.93	1.414
A10…someone with whom you have been using drugs?	2.99	1.377
A11…someone with whom you are very sexually aroused?	2.97	1.353
Total	33.39	14.231
How sure are you of being able to…?		
B1…ask your boyfriend or girlfriend if he/she has used and injected drugs.	2.73	1.383
B2…discuss AIDS prevention with your boyfriend or girlfriend?	3.26	1.374
B3…ask your boyfriend/girlfriend about his/her past?	3.14	1.349
Total	9.13	4.106
How sure are you of being able to…?		
C1…use a condom each time you have sex?	2.80	1.401
C2…use a condom correctly?	3.00	1.382
C3…use a condom during sex after you have been drinking alcohol?	2.54	1.309
C4…use a condom during sex after you have been using simulative drug? (Shisha/Gaya, Hashish, Cocaine and others)	2.52	1.313
C5…insist on using a condom during sex, even when your boyfriend/girlfriend would rather not use one?	2.53	1.284
C6...refuse to have sex if your partner does not agree to use a condom?	2.69	1.272

C7… always have enough money to buy condoms?	2.84	1.371
C8…go to pharmacy to buy condoms?	2.80	1.389
C9…not have sex until you are married?	2.94	1.438
C10 ... have sex only with one person during your whole lifetime?	3.03	1.480
C11 ... talk to your father about sexual topics?	2.22	1.331
C12 ... talk with your mother about sexual topics?	2.18	1.357
Total	32.09	16.327

As the below figure shows, more than half 220(51%) of participants had good level of HIV/AIDS preventive self-efficacy which is greater or equal to mean value and 210(49%) participants had poor level of HIV/AIDS preventive self-efficacy (Figure 6).

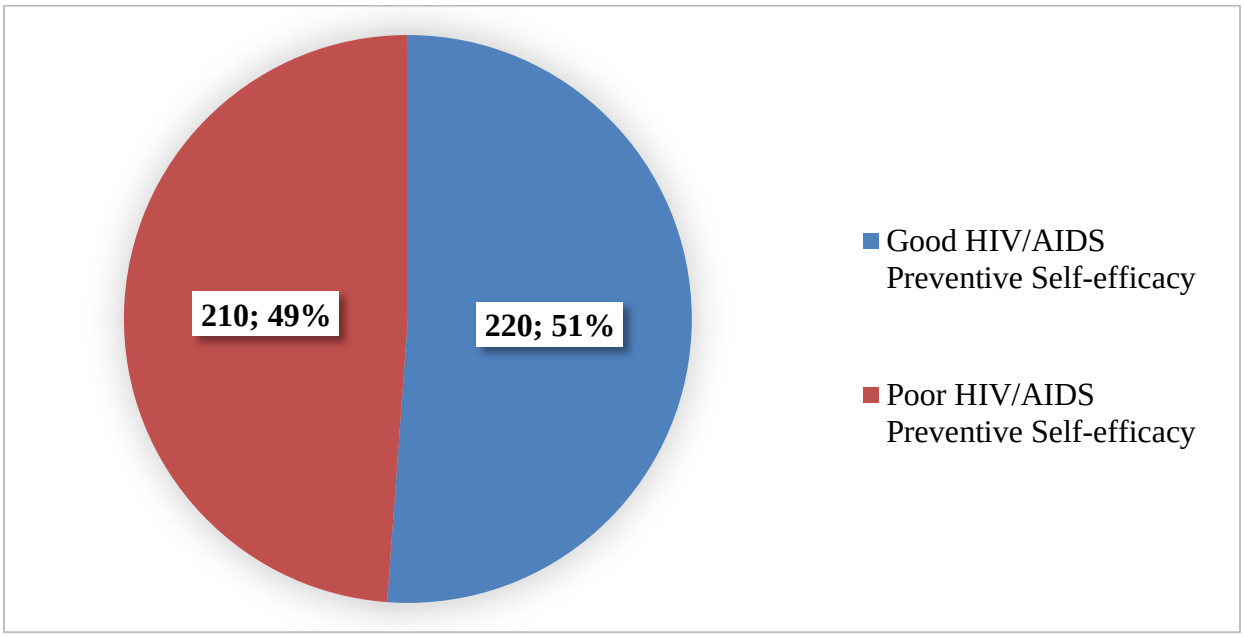


Figure 6 : Level of HIV /AIDS preventive self-efficacy among regular undergraduate students of Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020.

5.6 Factors associated with preventive self-efficacy

In this study the association of different background factors of the respondents with HIV/AIDS preventive self-efficacy was investigated using bivariate and multivariable logistic regression analysis. On bivariate analysis; students' sex, origin of residence, field of study, year of study, preparatory accomplishing ,drinking alcohol, had injected drugs, go to night clubs, ever had tested for HIV and ever had watched pornography were found to be statistically significant.

Variables those found statistically significant on bivariate analysis and had p-value less than 0.20 were entered into multivariable logistic regression with other important variable like level of HIV knowledge. During multivariable logistic regression; student sex, field of study, year of study, drinking alcohol and ever had watched pornography were found to be statistically significant predictors of HIV/AIDS preventive self-efficacy.

Female students were found 1.76 times more likely to have good preventive self-efficacy than male [AOR=1.76(1.04-2.81)]. In addition, students from field of health science were 1.92 times more likely to have good preventive self-efficacy than students from non-health field [AOR= 1.92(1.10-3.36)]. Regarding year of study, students from year II were 2.77 times more likely to have good preventive self-efficacy than year IV and above [AOR=2.77(1.55-4.94)], whereas students who drinking alcohol were found to be 2.9 times more likely to have good preventive self-efficacy than who did not drinking [AOR=2.9(1.61- 5.23)]. Whereas, students who ever had watched pornography were found to be 0.53 times less likely to have good preventive self-efficacy than those who had not ever watched pornography [AOR=0.53(0.33-0.85] (Table 7).

Table 7: Bivariate and Multivariate Logistic regression analyses of factors associated with HIV /AIDS preventive self-efficacy among study participants at Madda Walabu University Bale Zone, Southeast Ethiopia February 15-20/2020.

Variables	Preventive self-efficacy		COR(95%CI)	AOR(95%CI)	P-value
	Poor N (%)	Good N (%)			
Sex					
Female	53(12)	87(20)	1.94(1.28 -2.93)*	**1.76(1.04-2.81)***	**0.018***
Male	157(37)	133(31)	1.00	1.00	
Origin of residence					
Urban	98(23)	127(29)	1.56(1.07-2.28)	1.27(0.83-1.95)	0.276
Rural	112(26)	93(22)	1.00	1.00	
Field of study					
Health science	41(10)	75(17)	2.13(1.37,3.31)*	**1.92(1.10-3.36)***	**0.021***
Non-health science	169(39)	145(34)	1.00	1.00	
Year of study					
II	31(7)	88(20)	3.19(1.88-5.41)*	**2.77(1.55-4.94)***	**0.001***
III	106(25)	67(16)	0.71(0.45-1.12)	0.71(0.44-1.16)	0.17
IV and above	73(17)	65(15)	1.00	1.00	
Preparatory accomplishing					
Governmental	178(42)	176(41)	1.00	1.00	
Non-governmental	32(7)	44(10)	1.39(0.84-2.29)	1.21(0.69-2.12)	0.503
Drinking alcohol					
Yes	40(9)	60(14)	1.59(1.01-2.51)*	**2.9(1.61- 5.23)***	**0.000***
No	170(40)	160(37)	1.00	1.00	
Ever had tested for HIV					
Yes	111(26)	151(35)	1.95(1.32-2.89)	1.47(0.94-2.31)	0.091
No	99(23)	69(16)	1.00	1.00	
Ever had injected drugs					
Yes	35(8)	21(5)	0.53(0.3-0.94)	1.41(0.74-2.703)	0.302
No	175(41)	199(46)	1.00		
Go to night clubs					
Yes	12(3)	25(6)	2.12(1.03-4.33)	1.28(0.55-2.97)	0.56
No	198(46)	195(45)	1.00		
Ever had watched pornography					
Yes	93(22)	74(17)	0.64(0.43-0.94)*	**0.53(0.33-0.85)***	**0.009***
No	117(27)	146(34)	1.00	1.00	
Knowledge level					
Poor level	99(24)	110(25)	1.21(0.77-1.64)	1.42(0.87-2.33)	0.158
Good level	111(26)	110(25)	1.00	1.00	

6. DISCUSSION

This study has attempted to assess the level of HIV /AIDS preventive self-efficacy and associated factors among regular undergraduate students of Madda Walabu University. The finding showed that the mean level of HIV/AIDS preventive self-efficacy of the students were 74.58 (SD±19.98). The result of this study was in line with the study conducted in Taiwanese on 734 high school students 74.45(SD±17.05)(20), however the finding was lower than the study conducted in Turkey on 507 University students 87.66(SD± 23.94)(6) and study conducted on 962 Mexican adolescents from 60 public health centers 95.14(SD± 25.80)(21).

The possible reason for the discrepancies in HIV/AIDS preventive self-efficacy may be due to difference in data collection place. Further reason may be data about adolescents collected from high school students and public health center might be different from university. The difference in health education regarding HIV/AIDS and ways of delivering the education might also be the reason for difference. From my view in Ethiopia and study area, issue of HIV/AIDS is neglected in this time, there is limited public mass media alerting the students and other adolescents regarding prevention of this virus, and in the study area, even if there were HIV/AIDS Prevention office and clubs, but they were not actively updating the students with the issue of HIV/AIDS, which result in decreasing of student's preventive self-efficacy.

This study reported (51.4%) of respondents were knowledgeable about HIV/AIDS. This finding was higher than study conducted on Bahir Dar university students (45.7%) (26) and study conducted Madda Walabu University (49.37%)(27). However, the result of this study is lower than study conducted on undergraduate students of Addis Ababa Unıversıty (66%) (25). The difference in the finding may be due to difference in sample size and study period.

Of total respondents, in the study area, 160(37.2%) participants were found to be sexually active. This finding was lower than study conducted in Turkey University (52.7%) (6) and Wollega University, Ethiopia(49.1%)(24). However, the finding was higher than study conducted among students of Debre Berhan University (36.5%) (22) and Addis Ababa Unıversıty (26.8%)(25). The mean age of sexual debut of the participants in the study area was 18.21 ± 2.11 in which it was higher for males (18.55± 2.11) than for females (17.28± 1.89). The finding was higher than study conducted in Turkey University (17.8±1.98) in which it was 17.6±2.00 years for males

and 19.0±1.35 years for females (6) and related study conducted in Wollega University (17.2± 2.15) in which it was 17.5(±2.21) and 16.9(±3.10) years for males and females respectively (24) and students of Addis Ababa Unıversıty 17.4 years (25). The discrepancies may be due to difference in study place and period. The other reason may be difference in socio-characteristics and behaviour of the students in this different campus.

Among socio-demographic characteristics, sex was found to be significantly associated with HIV/AIDS Preventive self-efficacy. According to this study females were 1.76 more likely to had higher HIV/AIDS preventive self-efficacy when compared to males. In this study the mean HIV/AIDS Preventive self-efficacy was 71.38± 18.01 and 81.21± 22.18 for males and females respectively. This is consistent with the study conducted in Turkey University (6) and among Taiwanese adolescents(20). The reason may be due to female's precaution on sexual intercourse and fearing of suffer from the complication after sexual intercourse. The other reason may be due to family support for females, in which most of the time females were more oriented on sexual issues than males due to they considered them as victim. In the study area there was a restriction of female student's movement due to unsupported from communities' custom. However, male students were free for movements and involved in activities out of the campus. Therefore, this may be the reason for the difference in HIV/AIDS preventive self-efficacy between males and females in this study area.

This study revealed that field of study was significantly associated with HIV/AIDS Preventive self-efficacy. In this study health science students were almost 2 times more likely to have higher HIV/AIDS preventive self-efficacy when compared to non-health science students. The finding was consistent with study done in university of Turkey (6). The probable reason may be health science students were more informed about reproductive health and they could get HIV/AIDS education in their course. The other reason may be they had course like family planning which supports them to use condom in consistent way than non-health students.

This study found drinking alcohol was associated with higher HIV/AIDS preventive self-efficacy. The finding was inconsistent with study conducted on Taiwanese adolescence (20). Literatures showed there were association between substance use and risks for acquiring HIV/AIDS infection(34)(32)(33). The reason may be substance user's inability to controlling

their emotion after utilization of the substances. However, in this study area participants who were drinking alcohol had 2.9 times more likely had higher HIV/AIDS preventive self-efficacy compared to those who were not drinking. The probable reason may be participants who drinking alcohol may not fear for talking about sexual issues freely before having the sexual intercourse with their counterpart than who were shying to talk about the sexual and related issues, but may involve in practice.

The study found that there was significant association between exposure to pornography and HIV/AIDS preventive self-efficacy. Participants who ever had watched pornography were 0.53 times less likely to have higher HIV/AIDS preventive self-efficacy compared to who were not ever had watched. Exposure to pornography may be one of the risk for infection increases. This idea is supported by study conducted on Debre Berhan University in which pornography exposure shows significant association with risky sexual behavior(AOR=3.13)(35), on Bahir Dar university, students exposed to pornography risk for acquiring infection (AOR=13.5)(33) and qualitative study carried out in higher educational institution of Ethiopia were reported exposure to pornography as a problem for the infection increases(32).The reason may be increasement in internal motivation of the students towards sexual intercourse after watching the pornography which push them unintentionally to be involved in sexual activities. The other may be just due to their age, adding pornography on their fire age will put them in risk for this infection. Therefore, exposure to pornography was associated with HIV/AIDS preventive self-efficacy and risk for infection increase.

7. LIMITATIONS OF THE STUDY

As all other research, this research had also certain limitations.

- ✓ Since this study was a cross-sectional study design, the nature of the study may be difficult to ascertain the causal relationship between the study variables.
- ✓ Restricted in local (university level) decreases its representativeness because it was not done in the general population.
- ✓ Design effect was not considered.
- ✓ Lack of more published study on HIV/AIDS preventive self-efficacy to discuss more.

8. CONCLUSION

The mean HIV /AIDS preventive self-efficacy of the participants in this study area were found to be low. Variables like sex, field of study, year of study, drinking alcohols and ever had watched pornography were found to be factors associated with HIV/AIDS preventive self-efficacy. The study found more than half of the participants (51.4%) were knowledgeable about HIV/AIDS. However, the finding showed none zero number of participants involved in risk taking behavior.

9. RECOMMENDATIONS

Based on the findings of the study the following recommendation will be considered.

- ✓ Families should be well involved in educating/discussing about HIV/AIDS and sexual related issues with their sons/daughters freely.
- ✓ Madda Walabu University management office, office worked with related issue of HIV/AIDS and clubs should work hard to increase the student's level of HIV/AIDS preventive self-efficacy.
- ✓ Besides, that all staff should be cooperative in educating their students in any means to boost their self-efficacy.
- ✓ The state policy makers recommended to revise their policy concerning HIV/AIDS services at university level and communities' level at large.
- ✓ Professionals and researchers should work more in the areas concerning HIV/AIDS preventive self-efficacy in communities' level.

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11. ANNEXES

Annex A: Information Sheet and Consent form

Information Sheet

Greeting!

Good morning/afternoon dear respondent! My name is_____ and I am working as data collector for the study being conducted in this University by Mr. Chala Kene who is studying for his master's degree in Maternity and Reproductive Health at Addis Ababa University School of Nursing and Midwifery as postgraduate study. You are selected to be one of the participants in this study and you will be kindly requested to answer for questionnaires.

Study title– Assessment of level and factors associated with HIV/AIDS preventive self-efficacy among regular undergraduate students of Madda Walabu University, Southeast Ethiopia, 2020

Procedure and duration: there are different questions to be answered and will be take **10-15** minutes.

Risks: the risks of being participating in this study are very minimal, only taking few minutes from your time.

Benefit- at this moment you may not get any direct benefit by being involved in this study but the information you provide is very important to solve problem associated with preventive self-efficacy later on.

Confidentiality: I assure you that the information you are going to give me will be kept in secrete and your personal identifiers will not include.

Rights: Participation in this study is voluntary. You have the right to declare not to participate in this study and you have the right to withdraw from participating at any time.

Contact address: If there is any question or unclear idea any time about the study or the procedures, do not hesitate to contact and speak to principal investigators with cell phone number: **0925478702** or e-mail address **kenechala@gmail.com**

Permission: Your support and willingness in responding the questions will be very important for the success of this study, So that I need your cooperation to fill the questions that I am going to give you. Are you willing to participate in this study?

1. No (thank you)
2. Yes (continue)

Thank you for your cooperation!

Consent form

I have read the information sheet concerning this study (or have understand verbal explanation) and I understand what will be required of me and what will happen to me if I take part in this study. I also understand that any time I may withdraw from this study without giving a reason and I am free to fill or not to fill the questions.

Participant's signature _____ Date _____

Participant's signature certifying that the informed consent will be given written.

Data collector's name _____

Data collector's signature _____ Date _____

Result: (to confirm for completeness)

A. Questionnaire completed _____
B. Questionnaire partially completed _____
C. Participant refused _____
D. Others (please specify)_____

Checked by supervisors

Supervisor's Name _____

Supervisor's Signature _____

Date _____

Annex B: Questionnaires

Instruction 1: Circle your number of choice and fill blank space with visible hand write in provided space.

No	Variables	Options
	Section 1: Socio-demographic characteristics	
1	What is your sex?	1) Female 2) Male
2	What is your age in approximate years?	_____years
3	What is your marital status currently?	1) Single 2) Have boyfriend /girlfriend/ 3) Unmarried couple living together
4	Where was origin of your residence?	1) Urban 2) Rural
5	What is your religion?	1) Orthodox 2) Muslim 3) Protestant 4) Other(specify) _____
6	To which ethnic group do you belong?	1) Oromo 2) Amhara 3) Tigrean 4) Other(specify)_____
7	What is your field of study?	1. Health science 2. Non-health science
8	What is your year of study?	(1) Year II (2) Year III (3) Year IV (4) Year V (5) Year VI
9	How much monthly income do you get in birrs from parents or relatives? (**Approximately)**	1) <300 birr 2) >300 birr 8) Don't remember
10	Where did you accomplish your preparatory school?	1) Governmental 2) Non-governmental

	Section 2: Believe assessment items	
1	Do you believe that during stay in university, having life goal increase HIV/AIDS preventive self-efficacy of the students?	1) Yes 2) No
2	Do you believe that person who had more knowledge on HIV/AIDS have high preventive self-efficacy than person with low knowledge?	1) Yes 2) No
3	Do you believe that having spoken with someone other than parent or guardian about HIV/AIDS increase HIV/AIDS preventive self-efficacy?	1) Yes 2) No
4	Do you believe that condom use implies distrust/insult in one's partner?	1) Yes 2) No
5	Do you believe that getting condom easily increase HIV/AIDS preventive self-efficacy?	1) Yes 2) No
Section 3: Risk behavior assessment items		
1	I don't want to know the result, but have you ever had an HIV test and found your result? **If ''No'' Skip to Q 4**	1) Yes 2) No
2	If **"Yes" to Q 1**, did you voluntarily undergo the HIV test, or were you required to have the test?	1) Voluntary 2) Required
3	When did you have your most recent HIV test?	1) Within the past 3 months 2) Between 3 - 6 months 3) Between 6 - 9months 4) More than a year ago
4	During your stay in campus have you smoked cigarette? **If ''No'' Skip to Q 6**	1) Yes 2) No
5	If ''**Yes'' to Q 4,** how often you smoke cigarette?	1) Every day 2) At least once a week 3) Less than once a week 8) Don't remember 9) No response
6	During your stay in campus have you chewed kchat? **If ''No'' Skip to Q 8**	1) Yes 2) No

7	If '**Yes' to Q 6,** how often you chew chat?	1) Every day 2) At least once a week 3) Less than once a week 8) Don't know 9) No response
8	During your stay in campus have you drink alcohol? (Alcohol includes like Tella, Tej, Arake, Beer) **If ''No'' Skip to Q 10**	1) Yes 2) No
9	If '**Yes' to Q 8,** how often have you drink alcohol?	1) Every day 2) At least once a week 3) Less than once a week 8) Don't remember 9) No response
10	During your stay in campus have you tried a range of different types of drugs? **If ''No'' Skip to Q 12**	1) Yes 2) No
11	If '**Yes' to** Q **10,** which of the following, if any, have you tried? **More than one answer is possible**	1) Shisha/Gaya 2) Hashish 3) Cocaine 4) Other(specify)_____
12	Some students have tried injecting drugs using a syringe. Have you injected drugs during your stay in campus? **Drugs injected for medical purposes or treatment of an illness do not count.**	Yes No
13	During your stay in campus do you go to night club? **If ''No'' Skip to Q 15**	Yes No
14	If '**Yes' to** Q **13**, how many times you go per week?	Every day At least once a week < than once a week Don't remember No response
15	Have you ever had sexual intercourse? **[**For the purpose of this study," sexual intercourse," is defined as vaginal sex**].** **If 'No' skip to Q 26**	Yes No
16	At what age did you have first sexual intercourse?	_____ years

17	Did you use condom in your first sexual intercourse?	Yes No
18	How many sexual partner(s) you ever had in your lifetime?	One Two More than 2 8) Don't remember 9) No response
19	Currently, how many sexual partner(s) do you have?	One Two More than 2 Don't remember No response
20	Did you had sexual contact with person greater than you by at least 10 years old? **If No skip to Q 22**	Yes No
21	If **Yes to Q 19,** did you used condom?	Yes No
22	Did you had sexual contact with commercial sex worker (for male only)?	Yes No
23	If **Yes to Q 22,** did you used condom?	Yes No
24	Did you ever had sex while drinking alcohols?	Yes No
25	Did you ever had sex while using psychoactive drugs?	Yes No
26	Did you ever watched pornography?	Yes No

Section 4: HIV/AIDS Knowledge assessment items

No	Variables	Options
1	You can't get AIDS if you have sex only once or twice without a condom.	True False
2	A person can "pass" an HIV antibody test (test negative) but still be infected with HIV.	True False
3	Condoms are 100% effective in preventing HIV.	True False
4	Males can pass HIV on to others through their semen.	True False
5	You can get HIV by sitting on the seat of a toilet that a person with AIDS has used.	True False
6	Abstinence from sex and drugs is the best way for adolescences to avoid getting HIV.	True False
7	You can get HIV from drinking from the same glass or water fountain that a person with AIDS drank from.	True False

8	HIV can be found in semen, vaginal fluids, and blood.	True False
9	A person can get HIV by sharing drug needles.	True False
10	HIV can be found in breast milk.	True False
11	Once you are infected with HIV, you are infected for life.	True False
12	People infected with HIV are usually very thin and sickly.	True False
13	Some people have gotten HIV by swimming in the same pool as someone with AIDS.	True False
14	You can get HIV from a mosquito bite.	True False
15	Taking a test for HIV one week after having sex will tell a person if she or he has HIV	True False
16	Having sex with more than one partner can increase a person's chance of being infected with HIV	True False
17	Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.	True False
18	All pregnant women infected with HIV will have babies born with AIDS.	True False
19	People who have been infected with HIV quickly show serious signs of being infected	True False
20	A woman cannot get HIV if she has sex during her period.	True False

Section 5: Self-Efficacy Scale for AIDS

Instruction II: Circle your answer in the following table box provided with scale number. All questions will be answered on a five-point scale with, **1 meaning "not at all sure(ns)", 2 = "a little sure(ls)", 3 = "somewhat sure(ss)", 4 = "pretty sure(ps)" and 5 = "Very sure(vs)"**

How sure are you of being able to say 'no to have sex' when …	**ns**	**ls**	**ss**	**ps**	**vs**
A1…someone you've known for 30 days or less?	1	2	3	4	5
A2…someone whose sexual history is unknown to you?	1	2	3	4	5
A3…someone whose drug history is unknown to you?	1	2	3	4	5
A4 …someone you've known before?	1	2	3	4	5
A5…someone you would like to get involved with again?	1	2	3	4	5
A6…someone with whom you have had sex before?	1	2	3	4	5
A7…someone you need to fall in love with you?	1	2	3	4	5
A8…someone who puts pressure on you to have sex?	1	2	3	4	5
A9…someone with whom you have been drinking alcohol?	1	2	3	4	5
A10…someone with whom you have been using drugs?	1	2	3	4	5
A11…someone with whom you are very sexually aroused?	1	2	3	4	5
How sure are you of being able to…?					
B1…ask your boyfriend or girlfriend if he/she has used and injected drugs.	1	2	3	4	5
B2…discuss AIDS prevention with your boyfriend or girlfriend?	1	2	3	4	5
B3…ask your boyfriend/girlfriend about his/her past?	1	2	3	4	5
How sure are you of being able to…?					
C1…use a condom each time you have sex?	1	2	3	4	5
C2…use a condom correctly?	1	2	3	4	5
C3…use a condom during sex after you have been drinking alcohol?	1	2	3	4	5
C4…use a condom during sex after you have been using simulative drug? (Shisha/Gaya, Hashish, Cocaine and others)	1	2	3	4	5
C5…insist on using a condom during sex, even when your boyfriend/girlfriend would rather not use one?	1	2	3	4	5
C6...refuse to have sex if your partner does not agree to use a condom?	1	2	3	4	5
C7… always have enough money to buy condoms?	1	2	3	4	5
C8…go to pharmacy to buy condoms?	1	2	3	4	5
C9…not have sex until you are married?	1	2	3	4	5
C10 ... have sex only with one person during your whole lifetime?	1	2	3	4	5
C11 ... talk to your father about sexual topics?	1	2	3	4	5
C12 ... talk with your mother about sexual topics?	1	2	3	4	5

BIOGRAPHICAL SKETCH OF THE AUTHOR

The author was born on June12/1992 at Dire Sokoru, Berek woreda, in Oromia regional state. He attended primary school at Dire Sokoru primary school, his secondary and preparatory at Sendafa Senior Secondary and preparatory school. He then joined Madda Walabu University in 2013 G.C and received B.Sc. degree in Midwifery. As soon he graduated, he joined Madda Walabu University department of Midwifery as academician. After two years he has worked as academician, to follow his further studies and improve his qualification he joined department of Maternity and Reproductive Health at Addis Ababa University in 2019 G.C.

APPROVAL LETTER

ADDS ABABA UNIVERSITY

COLLEGE HEALTH SCIENCE SCHOOL OF NURSING AND MIDWIFERY

DEPARTMENT OF MIDWIFERY

I, the undersigned MSc student, declare that I have submitted my original work on a title "Level and factors associated with HIV/AIDS Preventive self-efficacy among regular undergraduate students of Madda Walabu University Bale Zone Southeast Ethiopia 2020" for the examination.

Submitted by:

Chala Kene (Bsc in Midwifery) _____ _____

Name of student Signature Date

This thesis work has been submitted for examination with my approval as an advisor.

Approved by:

Leul Deribe (MPH, Assistant Prof.) _____ _____

Name of Major Advisor Signature Date

Haweni Adugna (Msc, Lecturer) _____ _____

Name of Co-Advisor Signature Date

APPROVAL BY THE BOARD OF EXAMINATION

This thesis by Chala Kene is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of master in Maternity and Reproductive Health.

INTERNAL EXAMINER:

_____	_____	_____	_____
NAME	RANK	SIGNITURE	DATE

EXTERNAL EXAMINER:

_____	_____	_____	_____
NAME	RANK	SIGNITURE	DATE

RESEARCH ADVISORS:

LEUL DERIBE (MPH, Assistant Prof.)		_____	_____
NAME	RANK	SIGNITURE	DATE
HAWENI ADUGNA (Msc, Lecturer)		_____	_____
NAME	RANK	SIGNITURE	DATE

DEPARTMENT HEAD

_____	_____	_____	_____
NAME	RANK	SIGNITURE	DATE

STATEMENTS OF DECLARATION

By my signature below, I declare and affirm that this thesis is my own work. I have followed all ethical principles of scholarship in the preparation, data collection, data analysis and completion of this thesis. All scholarly matter that is included in the thesis has been given recognition through citation. I affirm that I have cited and referenced all sources used in this document. Every effort has been made to avoid plagiarism in the preparation of this thesis.

This thesis is submitted in partial fulfillment of the requirement for a master degree from Addis Ababa University College of Health Sciences, School of Nursing and Midwifery, department of Midwifery. The thesis is deposited in the Addis Ababa University Digital Library and is made available to local, national and international scientific community. I solemnly declare that this thesis has not been submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

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CHALA KENE (Bsc in Midwifery) Signature: _____Date: _____

RESEARCH ADVISORS:

LEUL DERIBE	(MPH, Assistant Prof.)	_____	_____
NAME	RANK	SIGNITURE	DATE
HAWENI ADUGNA	(Msc, Lecturer)	_____	_____
NAME	RANK	SIGNITURE	DATE