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3 Abera Getachew Obsa¹ and Berihu Angesom Weldihane²

4 ¹ Ambo University

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6

7 **Abstract**

8 Human Immunodeficiency Virus /Acquired Immunodeficiency Syndrome (HIV/AIDS) has
9 become increasingly public health problem worldwide. Particularly in developing countries'
10 higher institutions like Ethiopia. The victims are youngsters; productive age of the
11 population. The primary prevention and control of the spread of HIV/AIDS infection is
12 through awareness and changing behavior remains at the highest priority. However few studies
13 have been conducted among university students of Ethiopia on their self-efficacy of Human
14 Immunodeficiency Virus/Acquired Immunodeficiency Syndrome prevention and control.
15 Hence, this research is intended to investigate the Knowledge and self-efficacy of
16 MaddaWalabu University undergraduate Students on HIV/AIDS. An institutional-based
17 cross-sectional the study design was conducted among 605 under graduate students of
18 MaddaWalabu University students were selected using random sampling and data were
19 collected using by structured self-administered questionnaire. Descriptive independent sample
20 t-test and ANOVA were computed to analyze the data

21

22 **Index terms**— knowledge, self-efficacy, hiv/aids, university students.

23 **1 I.**

24 Background he world is now nearing the end of the third decade of the Acquired Immunodeficiency Syndrome
25 (AIDS) epidemic.

26 Unfortunately, although enormous progress in prolonging and improving the quality of life of those infected
27 with Human Immunodeficiency Virus (HIV) have been made, the world still has neither a cure for nor a vaccine to
28 prevent this disease. Perhaps most importantly, it has become increasingly clear that preventing the transmission
29 and the acquisition of HIV must focus upon promoting knowledge, develop self-efficacy and bringing behavioral
30 changes ??1]. However, it was also reported that HIV/AIDS has become the leading cause of death in the Sub-
31 Saharan African countries major mode of transmission being heterosexual contacts ??2]. Ethiopia is one of the
32 Sub-Saharan African countries most severely affected by the HIV/AIDS pandemic. HIV/AIDS national adult
33 prevalence rate is estimated at 1.5% ??3]. The adult prevalence of HIV infection in Ethiopia was estimated to
34 be 2.4% in which most of the burden occurring among younger age groups ??4, ??].

35 HIV/AIDS infections continue to be one of the world's greatest public health challenges as no vaccines have
36 been found for curative treatment of the deadly disease. The HIV virus is mainly spread through sexual intercourse
37 and the main hope to prevent infection remains modification of sexual behaviors including correct and consistent
38 condom use ??6]. Condoms offer safe, economically cheap and practically effective means of preventing both
39 unwanted pregnancies and sexually transmitted infections including HIV/AIDS when used consistently and
40 properly. This prevention strategy is however hindered by low use of condom especially by people living in
41 areas with HIV/AIDS epidemic although condoms are readily available ??7]. People's sexual behaviors take
42 place in complex socio-cultural settings and motivations for condom use. Condom use is complex and intricate
43 involving a range of levels such as individual, couple and community ??6].

6 A) STUDY DESIGN AND AREA

44 College students worldwide are at risk for contracting Sexually Transmitted Diseases (STD) and HIV/AIDS.
45 Condom remains the integral part of HIV prevention programs. The prevalence of condom use is low despite
46 all efforts to improve the use of it. Correct T Abera Geatchew Obsa ? & Berihu Angesom Weldihanes ?
47 Methods: An institutional-based cross-sectional study design was conducted among 605 under graduate
48 students of MaddaWalabu University students were selected using random sampling and data were collected
49 using by structured self-administered questionnaire. Descriptive independent sample t-test and ANOVA were
50 computed to analyze the data.

51 Result: This study result shows that among the total study participants, majority of the students (81.3%)
52 has ever experienced sexual relationship. To understand how to assist young people in practicing safer sex
53 (or transferring the knowledge into safer sex practices), research hers ??11] have considered prevention
54 communication as one of the key tools for behavioral change.

55 In 2010, about 68% of all people living with HIV resided in sub-Saharan Africa. It is also accounted for 70% of
56 new HIV infections, in 2010 ??12]. HIV/AIDS is affecting young members of the societies especially adolescents
57 between the age of 15 to 24 who are vulnerable and at risk of the disease. This young people represent 45% of
58 all new HIV infections ??12]. It is also estimated that most regular undergraduate university students lie within
59 the age group of 18 to 24 years [13]. In Ethiopia, higher risky sex (i.e. sex without adequate protection) both
60 within women and men are most prevalent among those living in urban areas in Addis Ababa. Among those with
61 secondary or higher education level are in the highest quartile. Among men, the prevalence of higher risky sex is
62 also notably high in Gambela, Dire-Dawa, Harare, Tigray and Afar ??14]. Although there are some encouraging
63 signs, surveillance results indicate that the epidemic is still progressing at a slower rate than previously predicated
64 ??13].

65 According to the second round HIV/AIDS Behavioral Surveillance Survey in Ethiopia, it was found out that
66 around 9.9 percent of the in-school youth (14.6 % of males and 5.3 % of females) had sexual experience ??13].
67 The mean and median age of sexual debut among youth was 16 years. Only that 41.8 percent of in school youth
68 who had sex with non-commercial partners reported consistent use of condoms. These are notwithstanding;
69 there is urgent need to understand factors influencing condom use to inform designing of effective preventive
70 strategies ??7]. Self efficacy reflects a person's level of confidence in his or her ability to control the environment
71 [15].

72 Sexual intercourse is the main mode of HIV transmission in Ethiopia, which is mainly driven by young people
73 [16]. Condoms are a key component of prevention strategies that individuals can choose to reduce their risks
74 of sexual exposure to HIV [16]. [10], however, condom utilization for prevention of HIV transmission requires
75 people to exercise control over their own behavior. Even though individuals acknowledge that safer sex practices
76 reduce risk of HIV infection and possess the required skills, they do not adopt them when they lack a sense
77 of self efficacy [17]. Thus this study aimed to investigate Knowledge and Self-Efficacy on HIV/AIDS among
78 Undergraduate Students of MaddaWalabu University, Southeast Ethiopia.

79 2 II.

80 3 Significance of the Study

81 Knowledge and self-efficacy of students concerning HIV/AIDS are the main variables for social development of
82 a society and country at large. Competent and efficient professionals and personnel can be produced if our
83 future professionals (students) get help and support during their stay at the university in relation to HIV/AIDS
84 self-efficacy problems. So that, studying knowledge and self-efficacy of the students regarding HIV/AIDS; used
85 for promoting HIV/AIDS prevention, intervention, and control. In turn, investigating the problem contributes
86 for development and poverty reduction of the country in general. It is also essential for policy formulation and
87 revision concerning HIV/AIDS services. Furthermore, the finding of this result will be as the base line data for
88 other interested professionals to conduct further study.

89 4 III.

90 5 Methods

91 6 a) Study design and area

92 Institutional-based cross-sectional study was conducted. The study used quantitative study design. Among 605
93 randomly selected regular undergraduate students in March, 2014 of MaddaWalabu University in Ethiopia were
94 participated which is found 430 KMs to the Southeast of Addis Ababa (capital city of Ethiopia) in Oromia
95 National Regional State. The university has two campuses, Robe main campus and Goba College of Medicine
96 and Health Sciences. The study included both male and female students in both campuses. In the year 2014
97 the university has ten schools, one institute, one college and thirty seven departments with the total number of
98 11511 undergraduate and post graduate students.

99 7 b) Sampling and Participants

100 Regular undergraduate students of Madda Walabu University were the source population and the study
101 populations were those selected students for study through simple random sampling. The sample size was
102 determined by using a single population proportion formula considering the assumptions: proportion of self-
103 efficacy which was 39% [18] level of confidence of 95%, margin of error 0.05, design effect of As indicated below
104 in a table, all of the participants (100%) reported that they have heard about HIV/AIDS. However, 123(20.3%)
105 and 482(79.7%) of the respondents said "yes" and "no" to the question that asked if they do know anyone who is
106 infected with HIV. Besides, 437(72.2%) of the participants reported that they do not know anyone who has died
107 of AIDS. On the other hand, 168(27.8%) of the sample respondents responded that they do know anyone who
108 has died of AIDS. Moreover, respondents were asked if they know the modes of HIV transmission and prevention.
109 With regard to this question, the majority of respondents reported that Unprotected Sexual intercourse, Mother
110 to child transmission, sharing infected sharp objects, blood Transfusion and Organ transplant are the major
111 modes of HIV transmission as responded by 1.52 and 10% non-response rate were considered. Finally the sample
112 size was 607.

113 The respondents were stratified into health and non-health campus. From the total ten non-health
114 schools (Robe campus) and one medicine and health sciences college of the university (Goba campus), eight
115 schools/college were selected randomly. The total sample size of the study was allocated proportionally for the
116 schools/college. Sample allocated for the schools/college were allocated proportionally for the stratified class year
117 under the departments of selected schools/college. Finally, simple random sampling was employed to recruit the
118 study subject.

119 8 c) Data collection and analysis

120 In order to collect the relevant and reliable data the researcher employed close ended questionnaire from the
121 tools used before by scholars in the area ?? *P<0.05 SS = Sum Squares; MS = Mean Square; Df = degree of
122 freedom The statistical analysis revealed that there was a statistically significant difference between male and
123 female students in their self -efficacy ($t = 8.130$, $df = 603$, $p<0.05$) (Table 5). However, statistical analysis
124 between male and female students was found to be significant. In addition, the descriptive statistics were also
125 computed to find out the differences in self -efficacy by sex. And, the results reveal that relatively male students
126 had more self-efficacy ($M= 53.6698$ and $SD= 8.09749$) than their female counter parts ($M= 48.7880$ and $SD=$
127 1.27338). The result has shown as that Male students are more confident than female students on HIV/AIDS
128 self-efficacy. Generally, students have scored below average self-efficacy (Expected mean (54) > (Observed mean
129 (52.2). *p<.05 M = Mean SD = Standard Deviation DF = Degree of Freedom As it can be infer from table -2.1
130 Using Students General knowledge regarding HIV/AIDS to predict Students HIV/AIDS Self-Efficacy yielded a
131 Statistically Significant Regression ($R = 0.445$ and $R^2 = 0.198$). That is 19.6% of the variance in Self-Efficacy was
132 explained by the independent variables called HIV/AIDS Knowledge. Furthermore, the direct effect of Students
133 HIV/AIDS Knowledge on their Self -Efficacy were determined by Bstandardized coefficient in the table ($R=$
134 0.445, $F=148.691$, $*P<0.05$), and then Students Knowledge of HIV/AIDS were statistically significant predictor
135 of students Self-Efficacy regarding HIV/AIDS (Table6). V.

136 9 Discussion

137 VI.

138 10 Conclusions

139 Respondents were asked if they know the modes of HIV transmission and prevention. With regard to this
140 question, the majority of respondents reported that Unprotected Sexual intercourse (42.5%), sharing infected
141 sharp objects (35%), Organ transplant (29.7%), Mother to child transmission (22.5%), and blood Transfusion
142 (13.2%), are the major modes of HIV transmission. Similarly, the participants reported that by being faithful
143 to uninfected sex partner (50%), by avoiding sharing of sharp objects (30%), by using a condom correctly &
144 consistently (28%), and by abstaining from sexual intercourse (20.3%) one can prevent himself/herself from
145 HIV/AIDS. Generally, result shows as that students have moderate level of HIV/AIDS knowledge. As a result,
146 Most of the students believed that being faithful to partner is the best prevention mechanism of HIV/AIDS.
147 Additionally, the statistical analysis disclosed that there is statistically significant age difference ($F (3,601) =$
148 143.473, $P<0.05$) among students on general knowledge of HIV.

149 Similar with this study, [20,21] found that almost all student had heard about HIV/AIDS and approximately
150 95% knew the most common routs of transmission.

151 Furthermore, the result showed more than 60% of the students knew persons infected and died of HIV/AIDS.
152 Moreover [22], found that 80% of the respondents know that HIV/AIDS could be transmitted via unprotected
153 sexual intercourse, sharing infected sharp objects, blood transmission, organ plants, and about 63-86% thought
154 abstain, condomuse, faithful to uninfected partner and avoiding sharing of sharp objects can prevent HIV
155 transmission. The above mentioned findings of this study showed that there was an awareness and self-efficacy
156 of the students on HIV/AIDS among Madda Walabu University.

10 CONCLUSIONS

157 However, this finding is higher than that found in a study conducted by [22]. This is inconsistent with [23]
158 that reports 47.4% of this study participant believes that they could tell if someone is infected with HIV just by
159 looking at a person, indicating the lower, awareness in this study population.

160 This misconception about HIV/AIDS is very dangerous in countries like Ethiopia where the prevalence is high
161 (4.4%) as HIV/AIDS Prevention and Control office [23].

162 Self-efficacy as the degree of confidence that the respondents show in their ability to engage in safe sex practices
163 by keep faithful to their partner, abstain from sex, obtaining condoms, keeping condoms, negotiating condom use
164 and using condoms with their partner/partners to protect themselves from contracting HIV/AIDS. In regarding
165 to this, there was a statistically significant gender difference in students self-efficacy ($t = 8.130$, $df = 603$, $p < 0.05$)
166 in which male students individual sexual doubt and having protected sex is crucial in the prevention and control of
167 HIV/AIDS. had more self-efficacy ($M = 53.6698$ and $SD = 8.09749$) than female ($M = 48.7880$ and $SD = 1.27338$).
168 Likewise, students general knowledge regarding HIV/AIDS significantly predicts Students self-efficacy to protect
169 them safe from HIV ($R = 0.445$ and $R^2 = 0.198$). That is 19.6% of the variable in self-efficacy was explained
170 by the independent variables called HIV/AIDS knowledge. Students knowledge of HIV/AIDS were statistically
171 significant predictor of students self-efficacy regarding HIV/AIDS. Specifically, students who had high knowledge
172 about the HIV/AIDS mode of transmission, mode of prevention and use of condom significantly forecasts their
173 belief and confidence of capability to pass challenges of risky behaviors keep faithful to their partner, abstain
174 from sexual intercourse and to use condom correctly and consistently. This implies, if we increase the HIV/AIDS
175 knowledge of our students, indirectly we are working on their capacity and strong belief to protect them from
176 infection. Other studies also recognize that, self-efficacy is an important determinant in reducing risky sexual
177 behaviors that could lead to HIV/AIDS [24]. They examined the roles of self-efficacy, outcome expectancies, and
178 perception of peer attitudes of adolescents at the beginning of sexual activity and examined how the constructs
179 affect the use of condoms among young people who are sexually active. To the contrary, this study suggested
180 admission types and level of education had a significant effect on enacting abstinence both on confidence not to
181 make premarital sex and ability to delay sex till marriage.

182 Academic year level also had significant effect on correctly and consistently use of condom. This is consistent
183 with the findings of [23] which depicts respondents with a higher level of schooling were aware of various
184 preventive methods. Similarly in addition to the above idea [25] in order to avoid risk behaviors by limiting
185 the number of sexual partners, delaying Students had moderate level of HIV/AIDS knowledge (49.37%). As a
186 result, most of the students believed that being faithful to partner is the best prevention mechanism of HIV/AIDS.
187 There was statistically significant age difference in comprehensive HIV/AIDS knowledge of students. There was
188 statistically significant gender difference in students self-efficacy regarding HIV/AIDS. Male students had more
189 self-efficacy than female students. The students' level of knowledge regarding HIV/AIDS significantly predicts their
190 level of self-efficacy of belief to protect themselves from HIV infection through abstinence, faithfulness and condom
use. About 81.3% of the students had ever experience sexual relationship. ^{1 2}

1

N	%
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Figure 1: Table 1 :

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4,5,

[Note: *]

Figure 2: Table 3 :

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²Knowledge and Self-Efficacy on Hiv/Aids among Undergraduate Students of Maddawalabu University, Southeast Ethiopia

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	SS	Df	MS	F	P
Between Groups	2821.33	3	940.445	143.473	.00
Within Groups	3939.47	601	6.555		
Total	6760.8	604			

Figure 3: Table 4 :

5

Sex	N	EPM	μ	M	SD	Df	t	Sig
Sex								
Male	421			53.6698	8.09749	603	8.13	.00
		54	52.2					
Female	184			48.788	1.27338	465.454	12.034	

Figure 4: Table 5 :

6

	Sum of Squares	Mean Square	Df	?	R	R ₂	Adjusted R ₂	F	Sig.
Regression	6109.78	6109.78	1	0.45	0.445	0.198	1.96 (19.6%)	148.691	.00
Residual	24777.5	41.09	603						
Total	30887.3		604						

Figure 5: Table 6 :

10 CONCLUSIONS

192 .1 Acknowledgment

193 From those, only 28.4% had regular sexual partner. The circumstances that stimulate students to have sex are:
194 The developmental age, social environment, peer pressure, and feeling of modernity, drug abuse, media (E.g.
195 pornography movies) and love, whereas 18.7% of the students did experience sexual intercourse still. This is
196 why due to lack of opportunity, fear of pregnancy, HIV/AIDS and other STDS, due to religious reasons, sexual
197 relationship phobia, thinking that is not right to do it at this age and do not want to do it before marriage and
198 even they rationalize that it will obstacle their educational goal

199 Year 2017 VII.

200 .2 Ethical Approval

201 The ethical issue was approved by Madda Walabu University Ethical Review Committee. A supportive letter
202 obtained from the University Research Directorate to all schools. For explaining the purpose of the study, verbal
203 consent was obtained from all participants. All the information given by the respondents has been used for
204 research purposes only, and confidentiality was maintained by omitting the names of the respondents. There
205 is no approval number and the University work with letter of permission written from University Research
206 Directorate to all schools, all departments and the subjects' oral consent.

207 .3 VIII. Availability of Data and Materials

208 Data supporting the findings are in the manuscript, additional data available up on request.

209 .4 IX.

210 .5 Abbreviation

211 We would like to acknowledge all participants of the study.

212 .6 XI.

213 .7 Funding

214 There was no any external funds provided for this research References Références Referencias The study was
215 conceived and designed by AG and BA, and both of them were involved in the conception. And also they
216 analyzed the data. AG prepared the manuscript and critically reviewed it. Both AG and BA also assisted in the
217 data collection and reviewed the manuscript, and have read and approved the final manuscript.

218 Knowledge and Self-Efficacy on Hiv/Aids among Undergraduate Students of Maddawalabu University,
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