The Impacts of HIV/AIDS Intervention Practices and Associated Factors among Debre Markos University Community

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Abstract

Background: Human Immunodeficiency Virus/Acquired Immuno Deficiency Syndrome impact assessment is used for the way to mobilize responses to HIV/ AIDS in the education sector and to refine planning in responses to HIV/ AIDS. But the impact of HIV/AIDS intervention is not well known in Debre Markos university community and similar setting of the country.

Objective: To assess the level of impact of HIV/AIDS intervention practices and associated factors among Debre Markos University community.

Methods: Institution based cross-sectional survey was conducted on 739 study participants selected using multistage sampling techniques from students, academic staffs, and administrative staffs. Data were collected using structured self-administered questionnaire. The collected data were entered into EPI data and exported to SPSS 20 version for analysis. Logistic regression model was used to fit data in order to identify factors associated with the impact of HIV/AIDS intervention.

Results: Majority, 535 (78.9%) of respondents were a 20-24 year with a mean age of 22.62 (± 3.58 SD) years. In this study 245 (36.1%) of participants had average and above score of impact information. Age of respondents found to have statistically significant association with the impact of HIV/AIDS intervention practice. The impact of HIV/AIDS intervention practice was 4.32 times more likely high among those respondents belongs to age group 15-19 years as compared to those belongs to age group 20-24 years [AOR=4.32; 95% CI (1.73, 10.77)].

Conclusion: The impact of HIV/AIDS intervention practices was low. Age group 15-19 years of respondents found to have a positive significant effect on the impact of HIV/AIDS intervention practice. HIV/AIDS intervention practices employing effective behavior change communication strategies are mandatory to bring further impact due intervention.

Keywords: Impact; HIV; AIDS; Intervention; Community

Introduction

Human Immunodeficiency Virus/Acuired Immuno Defficeincy Syndrom (HIV/AIDS) affects the basic education sector in varies ways, which is vital to the creation of human capital. HIV/AIDS has become one of the major obstacles to achieving education for all by the target date of 2015 [1].

HIV/AIDS threaten to reduce the effectiveness and efficiency of educational systems in high prevalence countries in Sub-Saharan Africa. It is estimated that 7 out of 10 new HIV/AIDS cases and 83% of AIDS deaths are in Africa [2,3]. In Ethiopia, the prevalence for 2007 estimated to be 2.1% for adult population aged 15-49 years [4]. In the context of the pandemic of HIV, students, and staffs who are sick, depressed, demoralized will impact on instructional

outcomes. Taking time off to nurse the sick, seek medical care and attend funerals will also adversely affect learning outcomes [3].

HIV/AIDS impact assessment is used for the way to mobilize responses to HIV/AIDS in the education sector and to refine planning in responses to HIV/AIDS [2,4]. Traditionally, education sector impact assessments have covered two main areas: Internal or supply-side impact reflects the susceptibility and vulnerability of sector employees and also the vulnerability of education delivery due to HIV/AIDS. On the other side, external or demand side impact reflects the impact on the demand for education services, ranging from changes in the expected numbers of students requiring education to the different needs of learners, for example, prevention skills or support for female and vulnerable groups of people. Impact assessments and monitoring activities are likely to be most relevant in countries where there is a high prevalence of HIV/AIDS [2-4].

Although various efforts were undertaken to combat HIV/AIDS spread, still there are a lot of problems in HIV/AIDS intervention practices such as too few people with HIV are aware of their infection, many people with HIV do not receive ongoing treatment, diverse populations require tailored prevention approaches, disparities in HIV rates are fueled by social and economic inequities, limited resources for HIV prevention force difficult choices and many people have become unworried about HIV [2,3,5].

There are more proven intervention tools than ever to help stop the spread of HIV. Proven tools include HIV testing and linkage to care; access to condoms and sterile syringes; risk reduction programs for HIV-positive and HIV-negative individuals; anti-retro viral therapy for infected individuals to reduce the risk of transmission; and screening and treatment for other sexually transmitted infections are very important and also the sensitive nature of HIV seroprevalence data reveal it vital that there be a clear HIV/AIDS policy, or HIV/AIDS in the workplace policy ensuring confidentiality, non-discrimination and established networks of support and counseling for affected employees [3,6].

Much of the response to HIV/AIDS in the education sector is based on understanding gained from impact assessments or studies of particular dimensions of impact. However, the above-mentioned intervention practices are not clearly known whether they brought impacts on HIV/AIDS spread at Debre Markos University Community. Therefore, the main objective of this study is to assess impacts HIV/AIDS intervention practices and associated factors at Debre Markos University Community.

Impact assessments are often intended to strengthen advocacy around impact of HIV/AIDS. This advocacy may aim to stimulate or strengthen mainstreaming of HIV/AIDS into the strategies and actions of the education sector or of other partner sectors to address various aspects of impact.

Methods and Materials

Study setting and period

This study was conducted from February 01, 2014 to February 20, 2014, at Debre Markos University. Debre Markos University is located in the eastern part of Debre Markos town East Gojjam zone, Amhara Region. It is 300 km away from Addis Ababa. Debre Markos University is established in 2005/2006 with 760 students in education stream, with 53 instructors and 15 administrative staffs. Currently from 2013-2014 the university has 6 colleges and 1 school with 6677 regular students (Male=4980 and Female=1697); academic staff 652 (Male=584 and Female=68); supportive staffs 608 (permanent 313 and contract 290). Total 7937 community members are in the university. The number of community members expected to increase in the coming academic year.

Study design and population

Institution based Cross-sectional study was conducted. Source population was all Debre Markos University community. The study population was regular students, academic and administrative staff in Debre Markos University in 2013-2014 who full filling inclusion criteria. All regular students above year I, academic and administrative staffs work for more than one year were included in the study. Those students, academic and administrative staffs who are seriously ill and withdrawals or on leave during the study period were excluded.

Sample size and sampling

The required sample size was calculated using Epi-Info by taking 35.5% of inconsistent condom use from a study conducted in Jimma University as one HIV/AIDS intervention impact parameter, 5% margin of error and 95% CI. Considering design effect of 2 and adding 5% non-response rate, the final sample size was 739. Multi-stage sampling technique was used to select study subjects. First, the community was stratified into students, academic and administrative staffs. Students in the university were stratified according to their college/school then by their field of study as health science and non-health science and the academic staffs were stratified into as health science and non-health science. The administrative staffs were further stratified by their permanent and contract employee. Finally, proportional numbers of participants (communities) were selected by simple random sampling technique using computer-generated random numbers.

Variables and measurement

The dependent variable of this study was level Impact of HIV/AIDs interventions (low/high) and Independent variables were demographic factors: Age, sex, occupation, educational status, marital status, religion, region, income; Other related variables: status of HIV infection, Sexual health information, year of stay in university, HIV/AIDS services provision, peer pressure, substance use, accessibility of condoms, accessibility of life skill training, sexual harassment, awareness about HIV and AIDS policy, accessibility of care and support for those who need help.

The impact of HIV/AIDS interventions

Influences on HIV/AIDS adverse conditions that bring implications for the delivery of education services such as absenteeism-illness related conditions, pension, death, and follow VCT services, use a

condom, aware about HIV/AIDS related information. Participants were asked whether they had enough impact information like 1) internal impact information (illness and attrition rate, skill availability, employees and students medical and pension benefits, Absenteeism, Work processes and places, HR systems and Overall impacts) and 2) external impact information (Infection and illness of learners, Affected learners), 3) General and cross-cutting issues (Vulnerable institutions and groups, HIV/AIDS response analysis). About 34 questions were asked to address all these aspects. Total score of impact was calculated and the mean score was taken as a cut-off to say the intervention had an impact or not. **Consistent condom users:** use of condom every time during sexual intercourse.

Data collection methods

The questionnaire was prepared based on the available literature reviewed to elicit contributing factors of impact of HIV/AIDS interventions. Pre-test was done on 5% of the subjects outside of study area. Data were collected using pre-tested and self-administered questionnaire. The questionnaire was originally prepared in English language and then translated to the Amharic and then retranslated to English. Data were collected by trained data collectors with supervisors. The supervisors and principal investigators were performed immediate supervision on a daily basis. The overall data collection process was controlled by the principal investigators. Questionnaire was checked for completeness immediately after each day's collection. Data were entered in Epi data version 3.1 computer programs to minimize data entry error.

Data processing and analysis

The entered data were exported to SPSS version 20 for analysis. Descriptive analysis was used to describe the number and percentage distribution of variables. Logistic regression was used to fit data in order to identify factors associated with impact of HIV/AIDS intervention. All explanatory variables that were associated with the outcome variable in bivariate analysis with p-value of 0.20 or less were included in the initial logistic models of multivariable analysis. The crude and adjusted odds ratio together with their corresponding 95% confidence intervals was computed. A P value <0.05 was considered to declare a result as statistically significant in this study.

Ethical approval

Ethical clearance was obtained from Debre Markos University research review board. Then formal letter that explains the Objectives, Rationale and expected outcomes of the study was written to the respective colleges/sectors which requests cooperation. Finally, a time arrangement was made between the investigator and department heads along with class coordinating students/staff and those randomly selected students. All procedures were kept confidential.

Results

Socio-Demographic characteristics

From the total of 739 respondents, 678 participants participated

with overall response rate of 91.75%. The majority, 535 (78.9%) of respondents belonged to age group 20-24 year with the mean age of 22.62 (± 3.58 SD) years. The majority, 460 (67.8%) of respondents were male and 574 (84.7%) of respondents were students followed by supportive staff 58 (8.6%). One hundred sixty-five (28.7%) of respondents were from technology followed by social science, 132 (23%). Only 47 (8.2%) were on café students whereas 527 (91.8%) uses the cafeteria. The educational status of study participants 566 (83.5%) of respondents were university students, 65 (9.6%) degree and above whereas the rest were diploma and below. The majority, 575 (84.8%) of respondents were single and 609 (89.8%) of respondents were orthodox Christian followers **(Table 1)**.

Sexually related respondent's characteristics

With regard to the history of sexual intercourse, 198 (29.2%) of respondents had ever started sex of which 73 (36.9%) of respondents were started after joined the university. Of those who started sex, 28 (14.1%), 19 (9.6%) encountered unwanted pregnancy and sexually transmitted diseases respectively. Of

Table 1 Socio-Demographic Characters of Debre Markos University Community, 2014.

Variables	Number	Percentage
Sex;		
Male	460	67.8
Female	218	32.2
Age:		
15-19	27	4.0
20-24	535	78.9
25 and above	116	17.1
Occupational Category:		
Academic staff	46	6.8
Supportive staff	58	8.6
Student	574	84.7
College		
Health sciences	92	16.0
Agriculture	72	12.5
Social science	132	23.0
Natural science	90	15.7
Technologyk2	165	28.7
Law	23	4.0
Educational status:		
Certificate	17	2.5
Diploma	30	4.4
University student	566	83.5
Degree+	65	9.6
Marital status		
Single	575	84.8
Married	87	12.8
divorced/widowed	16	2.4
Religion		
Orthodox	609	89.8
Muslim	36	5.3
Protestant	28	4.1
Others(pagan)	5	0.7

those who ever started sexual intercourse, 139 (70.2%) of the respondents were practiced unfaithful sex/extramarital sex and 59 (29.8%) of them were practiced faithful sex. Concerning sexual drive mechanisms, 126 (63.6%), 103 (52.0%), 66 (33.3%), 54 (27.3%) and 16 (8.1%) of the respondents were derived by close relation with opposite sex peer, personal hormone, by watching sex film, similar sex peer pressure, substance use, respectively **(Table 2)**.

Regarding a number of sexual partners among start sex before university life, 39(31.2%), 46(36.8%), 40(32.2%) of the respondents had with only one, two and three partners respectively. on the other hand among those who started sex after university life, 38(52.2), 23(31.5%) and 12(16.4%) had with only one, two and three respectively **(Figure 1)**.

HIV/AIDS intervention and status

The majority, 468(69%) of respondents were aware of their HIV status and 21(4.5%) of them had self-reported seropositive. Five hundred sixty-five (83.3%) of respondents were a volunteer to be tested and the remaining were either hesitate or could not know. The reason for heisting 45(39.9%) to be tested was fear of stigma and discrimination **(Table 3).**

Condom and contraceptive utilization

The majority of respondents, 409 (60.3%) of respondents have believed that condom distribution is necessary for students. Overall condom utilization was 92(13.6%) and whereas 297(43.8%) still had an unfavorable attitude towards condom use. Among contraceptives users, the condom was utilized by 56(40.3%), natural method 15(10.8%) and 39(28.1%) did not use any type of contraceptive. One hundred fifteen (30.2%) respondents have developed a favorable attitude towards condom use after joining the university. The major reasons for the non-use of condom were unpleasant 122(41.1%), unknown reason 101(34%) and poor access 13(4.4%) **(Table 4).**

HIV/AIDS related services

Concerning HIV/AIDS-related service, 226(33.3%) had got services and 452(66.7%) had not. Regarding types of services provide, 158(69.9%), 25(11.1%) and 43(19.0%) were gain VCT/PICT, condom, and training respectively. On the other hand, service on reproductive health information, 235(34.5%) got enough information of which 129 (54.9%) of them got such information from peer discussion. But the majority of respondents, 521(76.8%) did not get information about the three obstacles (HIV/AIDS, STIs, and unwanted pregnancy) whereas only 157(23.2%) of them self-reported as had information and listed them **(Table 5).**

Custom of leisure time management and participation in different club affairs

About 169 (24.9%) of participants participated in different clubs affairs of those, 84(49.7%) participated in anti-HIV/AIDS club and 32(18.9%) in the reproductive health club. Three hundred seventeen (46.8%) were read spiritual books, 201(29.6%) were watch film and the rest were listening to music during their leisure time. A few, 33(4.9%) were the smoke cigarette of which

Table 2 Sexual Relationship Impact Conditions of the Study Participants, Debre Markos University Community, 2014.

Variable	Frequency	Percent
Start sex:		
Yes	198	29.2
No	480	70.8
When to start sex:		
Before university	125	63.1
After university	73	36.9
Caused/encountered unwanted pregnancy:		
Yes	28	14.1
No	170	85.9
When caused/encountered unwanted pregnancy:		
Before university	20	74.4
After university	8	28.6
Exposed to sexually transmitted diseases:		
Yes	19	9.6
No	179	90.4
When Exposed to sexually transmitted diseases:		
Before university	15	78.9
After university	4	0.6
Having sexually unfaithful/extramarital sex:		
Yes	139	70.2
No	59	29.8
Sexual drive by watching sex film;		
Yes	66	33.3
No	132	66.7
Sexual drive by similar sex pressure;		
Yes	54	27.3
No	144	72.7
Sexual derive close relation opposite sex;		
Yes	126	63.6
No	72	36.4
Sexual drive by own hormone;		
Yes	103	52.0
No	95	48.0
Sexual drive by substance use;		
Yes	16	8.1
No	182	91.9

20(60.6%) were started before joining the university. Only 46(6.8%) of respondents were chewed chat of which 32 (69.6%) of respondents were started before joining the university. Concerning alcohol drink, 202(29.8%) of respondents were drunk alcohol of which 144 (71.3%) of them had started drinking alcohol after they joined the university. Regarding watching sex film, 162 (23.9%) of the respondents watch sex film of which 93 (57.4%) of them were watched after they joined the university. Concerning night club attendants, 91 (13.4%) of the respondents confirmed as they were attending. Among these, 49(53.8%) of them started to attend night club after they joined this university **(Table 6)**.

Care and support distribution and attrition rate from duty

Regarding Care and support gain, 65(9.6%) of the respondents had got care and support as far as concerning reproductive health need and most of the respondents 613(90.4%) did not gain. On the other hand, among respondents who gained care
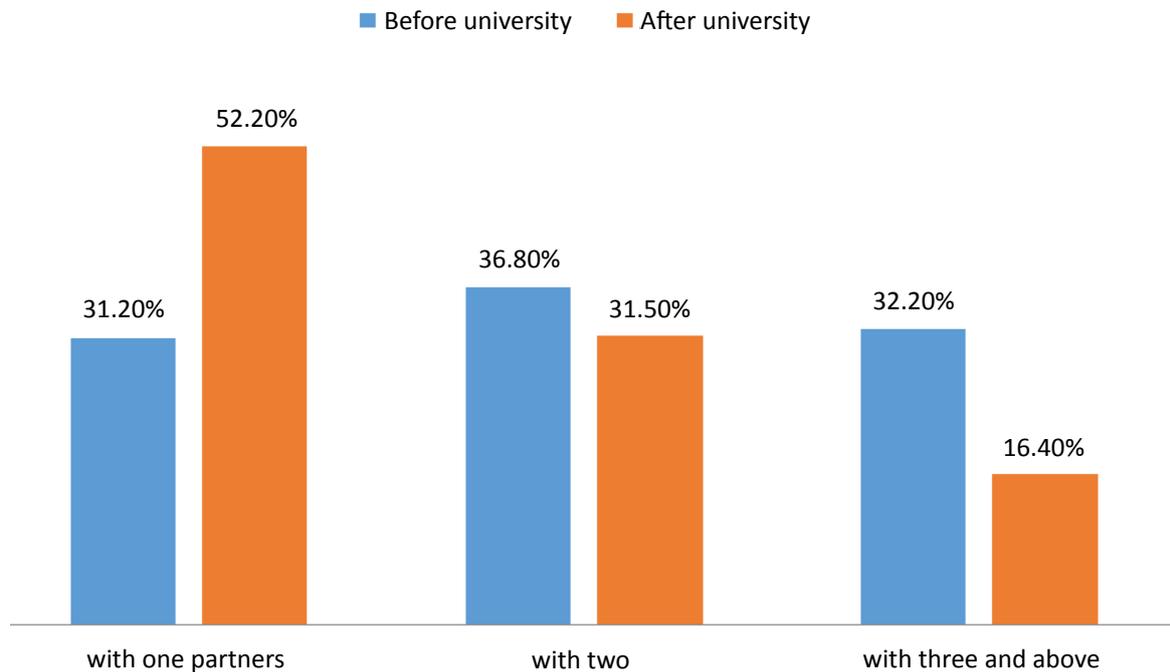
Figure 1 Percentage distribution of sexual relationship partners before university and after university life among study participants, Debre Markos University 2014.

and support 23(35.4%) of them rated the care and support service as it was poor. Of the total respondents, 372 (54.4%) stated the satisfaction of HIV/AIDS intervention service in this university was poor and 149 (22.0%), 157(23.2) rated as it was very good and good respectively. Concerning attrition rate from duty, 246(36.3%) of the respondents self-reported as they had absent from duty due to illness. Among self-reported, 165(67%) were absent two and above day and 81(33.0%) were less than two days **(Table 7)**.

HIV/AIDS prevention methods and awareness on related stigma

Regarding utilization of HIV/AIDS prevention methods, 360(53.1%), 176(26.0), 76 (11.2) utilized abstain, one to one, condom respectively. Among those who utilized HIV/AIDS prevention methods, 483(71.2%) had developed the methods after this university life. Regarding awareness of card utilization, 542(79.9%) of the respondents did not aware of about the red card. Among those who had awareness, 83(61.0%) did not have cards at their hand. Four hundred fifty four (67.0%) of the respondents said they constantly gave good greetings of which 382(84.1%) were developed such behavior during their university stay **(Table 8)**.

Impacts of HIV and AIDS intervention and its associated factors

About 34 questions were asked to address all the impact information aspects. Total score of impact was calculated and the mean score was taken as cut-off to say the intervention had an impact or not. Those respondents who score more than an average and above score were considered as the intervention

brought impact on their life. The present study revealed that 245(36.1%) of participants had average and above score of impact information i.e., they categorized as having enough information about HIV and AIDS intervention. This indicated that the impacts of HIV and AIDS intervention in university found to be 36.1%. Specifically, the intervention brought impact on 19(70%) of those participants belongs to age group 15-19 years **(Table 9)**.

In order to investigate the association of some socio-demographic and other independent variables with Impacts of HIV and AIDS Intervention Practices, multivariable analysis was used. Since considered variables for possible association were few in number enter methods of variable section was used i.e., all variables were included in the final model to see their possible association with age, sex, marital status, HIV status awareness, attitude toward condom, alcohol use, cigarette smoke, history of chat chewing, participation in club affairs, watching sex films, believe on the necessity of condom distribution, year of study in university, getting adequate sexual information, getting provided services, ever had sex, participation in life skill training and food service were included in variable multivariable logistic regression analysis. The multivariable logistic regression analysis was used by taking all the eighteen factors into account simultaneously and only one of the most contributing factors remained to be significantly and independently associated with impacts of HIV and AIDS Intervention Practice (age of respondents). Age of respondents found to have statistically significant association with the impact of HIV and AIDS intervention practice. The impact of HIV and AIDS intervention practice were 4.32 times more likely high among those respondents belongs to age group 15-19 years as compared to those belongs to age group 20-24 years with [AOR=4.32; 95% CI (1.73, 10.77)] **(Table 9).**

Table 3 HIV and AIDS Status Distribution of the Study Participants, Debre Markos University Community, 2014.

Variable	Number	Percent
Aware of HIV/AIDS status after this university :		
Yes	468	69.0
No	210	31.0
Current HIV/AIDS status:		
Free from HIV/AIDS	447	95.5
Have HIV/AIDS	21	4.5
Voluntary to give sample blood for HIV test:		
Yes without hesitation	565	83.3
Yes with hesitation	58	8.6
I do not give	55	8.1
Reason for giving blood with hesitation, don not:		
Fear due to discrimination	45	39.3
Fear due to gay man disease	10	8.8
Fear due to incurable	18	15.9
Other (most of them loved their own blood)	40	35.4

Table 4 Condom and Contraception Utilization, Attitude Distribution among the Study Participants, Debre Markos University Community, February 2014.

Variable	Number	Percent
Types of Contraceptive Use:		
Pills	29	20.9
Natural method	15	10.8
Condom	56	40.3
Do not use any	39	28.0
Attitude towards condom:		
Favorable	381	56.2
Unfavorable	297	43.8
Reasons for unfavorable attitude to condom:		
Sense reduction	61	20.5
Uncomfortable	122	41.1
Poor access	13	4.4
Do not know the use	101	34.5
Constantly condom utilization rate:		
Yes	92	13.6
No	586	86.4
Acceptance of condom distribution for students:		
Yes	409	60.3
No	269	39.7

Discussion

The impact of HIV/AIDS on education systems and classrooms around the world are increasingly recognized as a significant obstacle to development, including efforts to achieve Education for All (EFA) and the six goals set at the World Education Forum in Dakar in April 2000. In order to continue progress towards the six EFA goals, increased commitment and action are needed to develop and implement comprehensive strategies that take into account the impact of HIV and AIDS on learners, educators, educational institutions and the education sector as a whole [7].

Understanding that only local solutions will solve local challenges, this series aims to pull together a variety of programmatic and policy experiences from different aspects that can be drawn upon when addressing university community HIV/AIDS education needs. It is our hope that the intervention practice in HIV/AIDS and education series will be used by a variety of people engaged

in responding to HIV/AIDS through education. This intervention has to bring impact in education sectors like DMU. Therefore, the present study was aimed to assess the impacts of HIV/AIDS intervention practices and its associated factors among Debre Markos University Community. The finding of the present study revealed that the impacts of HIV/AIDS intervention in university found to be 36.1%. It was found to be low when compared with the finding of randomized controlled trial on impact of improved treatment of STDs on HIV infection in Tanzania general population which was 40% [8]. The difference might be the difference in design, source population, and socio-demographic characteristic.

According to participants' self-report, 69% of respondents were aware of their HIV status of which 4.5% of them had self-reported seropositive. This figure is relatively higher than the national adult prevalence of HIV/AIDS 1.5% for 2011 and 1.2% projected for 2014 [9]. The reason could be the data obtained from antenatal sentinel that did not include the sexually active people rather than pregnant women.

One of the impacts of the HIV/AIDS intervention practices was creating motivated people for a blood test to aware of their HIV/AIDS status without any hesitation, in this regard, the magnitude of the study participants was high which was 83.3%. This finding was higher when compared with a study did Mwanza region of Tanzania which less than 10% of the study participants know their HIV/AIDS status [10]. The gap might be the intervention efficiency of the sector or education level of the study participants at the study area.

Concerning the intervention gained, 69.9% of the respondents had got the intervention services which were provided by the

Table 5: HIV and AIDS Services Distribution among the Study Participants, Debre Markos University Community, 2014.

Variable	Number	Percent
HIV and AIDS service gained:		
Yes	226	33.3
No	452	66.7
Types of HIV and AIDS service gained:		
VCT/PICT	158	69.9
Condom	25	11.1
Trainings	43	19.0
Information on reproductive health:		
Yes	235	34.5
No	443	65.3
Sources of reproductive health information:		
Lecture	28	11.9
Seminar	64	27.2
Peer discussion	129	54.9
Others (mostly from mass media)	14	6.0
Information on the three obstacles for campus life:		
Yes	157	23.2
No	521	76.8
Life skill training participants:		
Yes	218	32.2
No	460	67.8
Information on university HIV/AIDS Policy:		
Yes	171	25.3
No	507	74.8

Table 6 Custom of Leisure Time Management, Participation in Different Club Affairs, among the Study Participants, Debre Markos University Community, February 2014.

Variable	Number	Percent
Club affair participants:		
Yes	169	24.9
No	509	75.1
Club affair participants by types :		
HIV/AIDS	84	49.7
Reproductive health	32	18.9
Others (female, environment, etc.)	53	31.4
Entertainment at leisure time:		
Music	147	21.7
Film	201	29.6
Spiritual books	317	46.8
Smoking habit:		
Yes	33	4.9
No	645	95.1
When to start smoking:		
Before university	20	69.6
After university	13	39.4
Khat chewing:		
Yes	46	6.8
No	632	93.2
When to start Khat;		
Before university	32	69.6
After university	14	30.4
Alcohol use:		
Yes	202	29.8
No	476	70.2
When to start alcohol use		
Before university	58	28.7
After university	144	71.1
Habit of watching sex film:		
Yes	162	23.9
No	516	76.1
When to start sex film watch:		
Before university	69	42.6
After university	93	57.4
Nightclub attendant:		
Yes	91	13.4
No	587	86.6

university HIV/AIDS, and gender office. This was relatively good for addressing HIV/AIDS services to the university community. But the significant number of the university community still did not get the interventions provided by the university among who got the intervention VCT/PICT took the majority, 69.9%, followed by 19.0% training and condom services (11.1%). This depicts that the intervention almost focused on identifying oneself from HIV/AIDS status which is the corners stone of HIV/AIDS prevention task. The university has to see the gap of interventions between VCT/PICT, condom distribution, and training and try to address these gaps in order to prevent and control HIV/AIDS infection.

In this study about establishing well-informed society particularly on the university community about the three obstacles (HIV/AIDS, sexually transmitted diseases, and unwanted pregnancy) in campus life, 23.2% of the respondents were identified as they were well informed and protected from HIV/AIDS infection.

This shows that the university still has a huge gap to reach the remaining 77.8% of the university community about the three obstacles in campus life. Data were not found to compare the above findings. We remark on this regard raising awareness about the three campus life obstacles a great deemed.

In present study sexual partners of the study participants were found to be 31.2%, 36.8%, 32.2% had sexual contact with one,

Table 7 Cares and Support Gain and Attrition Rate from Duty, the Study Participants, Debre Markos University Community, February 2014.

Variable	Number	Percent
Care and support gain		
Yes	65	9.6
No	613	90.4
Care and support satisfaction rate		
very good	24	36.9
good	18	27.7
poor	23	35.4
HIV and AIDS intervention protection from HIV:		
Yes	223	32.9
No	455	67.1
Satisfaction rate of HIV and AIDS intervention		
very good	149	22.0
good	157	23.2
poor	372	54.8
Absent from duty due to illness		
Yes	246	36.3
No	432	63.7
Duration of absent from duty		
Less than two days	81	33.0
Two and above days	165	67.0

Table 8 HIV/AIDS Prevention Methods and awareness on related stigma of Debre Markos University Community, February 2014.

Variable	Number	Percent
Utilization of HIV and AIDS prevention methods:		
One to one	176	26.0
Use condom	76	11.2
Abstain	360	53.1
VCT	18	2.7
Never any	48	7.1
When developed utilization HIV/AIDS prevention:		
Before university	195	28.8
After university	483	71.2
Knowledge about utilization of red card:		
Yes	136	20.1
No	542	79.9
Presence of red card at hand:		
Yes	53	39.0
No	83	61.0
Where to get red card:		
Outside university	23	43.4
At university	30	56.6
Constantly give good greetings to HIV patients:		
Yes	454	67.0
No	224	33.0
Constantly give good greetings to HIV patients:		
Yes	454	67.0
No	224	33.0

Table 9 Impacts of HIV/AIDS Intervention and its associated Factors among DMU community, Ethiopia, 2014.

Variables	No (%)		P-value	AOR with 95%CI
	Have impact	Have not impact		
Age				
15-19 years	19(70)	8(30)	0.002*	4.32 (1.73, 10.79)
20-24years	183(34)	352(66)		1.0
>=25years	43(37)	73(63)	0.598	1.21 (0.61, 2.38)
Sex				
Male	164(37)	296(64)		1.0
Female	81(37)	137(63)	0.668	0.91 (0.58,1.43)
Foodservice				
Café	191(36)	336(64)		1.0
Non-café	18(38)	29(62)	0.733	1.12 (0.58, 2.20)
Marital status				
Single	200(35)	375(65)		1.0
Ever married	45(44)	58(56)	0.173	1.51(0.84, 2.73)
Sexual intercourse history				
Yes	71(36)	127(64)	0.185	0.73 (0.45 , 1.17)
No	174(36)	306(64)		1.0
Aware HIV status				
Yes	176(38)	292(62)		1.0
No	69(33)	141(67)	0.072	0.69 (0.46, 1.03)
Get service on HIV & other				
Yes	87(38)	139(62)	0.713	1.08 (0.71, 1.64)
No	158(35)	294(65)		1.0
Adequacy of information provided				
Yes	91(39)	144(61)	0.478	1.16 (0.77, 1.76)
No	154(35)	289(65)		1.0
Year of stay in university				
One year	27(37)	46(63)	0.925	1.03 (0.51, 2.08)
Two year	93(34)	182(66)	0.366	0.84(0.57, 1.23)
Three year	125(38)	205(62)		1.0
Attitude toward condom				
Favorable	147(39)	234(61)		1.0
Unfavorable	98(33)	199(67)	0.107	1.37 (0.93, 2.01)
Club affairs participation				
Yes	71(42)	98(58)	0.094	1.42(0.94,2.13)
No	174(34)	335(66)		1.0
Cigarette smoke				
Yes	14(42)	19(58)	0.204	1.87 (0.71, 4.91)
No	231(36)	414(64)		1.0
Chew Khat				
Yes	16(35)	30(65)	0.468	0.73(0.31, 1.72)
No	229(36)	403(64)		1.0
Drink alcohol				
Yes	72(36)	130(64)	0.293	0.79 (0.51, 1.22)
No	173(36)	303(64)		1.0
Watch sex film				
Yes	65(40)	97(60)	0.341	1.24 (0.79, 1.94)
No	180(35)	336(65)		1.0
Believed on condom distribution necessity				
Yes	148(36)	261(64)		1.0
No	97(36)	172(64)	0.961	1.01 (0.68, 1.50)
Participation in life skills training				
Yes	85(39)	133(61)	0.525	1.14(0.77, 1.68)
No	160(35)	300(65)		1.0

two and three and above before their university life respectively. On the other hand, 52.2%, 31.5%, 16.4% of the respondents had sexual contact with one, two and three and above people after university life respectively. This shows that the university community starts sexual contact with multiple partners before university life from this we can say that the university intervention system needs analyzing the communities' behavior before launching its intervention practice. Regarding the study participants' number of sexual contact partners after university among those who sex started after university life more than half of the respondents had sexual contact with one partner. The trend looks like decreasing the number of partners. This shows that the university is striving to carve the habit of having partners more than one but great effort is needed to make zero people having more than one sexual contact or polygamy behavior throughout their life. This finding was comparable with the Ethiopian Ministry of Education strategy and research documents [11]. The adolescents who received the AIDS intervention subsequently had greater AIDS knowledge, less favorable attitudes toward risky sexual behavior, and lower intentions to engage in such behavior than did those in the control condition. Follow-up data collected 3 months later revealed that the adolescents who had received the AIDS intervention reported, fewer sexual partners, greater use of condoms [12,13]. And the result in this study revealed that the trend of having multiple sexual partners seeming to decline but pertinent intervention is needed.

Concerning extramarital sex, 139(70.2%) of the respondents had reported as practiced sexual contact outside their marriage. Sexual contact outside of marriage is the serious act and can be one of a method for the spread of HIV/AIDS. This trend is very critical since it destroys the whole family life and adds a dependency for the national as well as a global burden. The university should target the intervention not only single people but also married people. The result was compared with the survey on age 16-21 years about infidelity/extramarital facts; Thai 52%, Americans 45%, Czech Republic 38%, German 40%. The finding of this study was higher. The difference might be sample size and population behavior towards faithfulness [14].

Improving consistent condom utilization due to intervention was found to be 13.6% of the study participants and 43.8% of respondents had an unfavorable attitude towards condom use. This implies that the university HIV/AIDS intervention scheme focused on condom utilization to bring an impact to create a favorable attitude towards condom because attitude has an influential value for the motivation of intention and then behavior to occur. This finding was lower with High-risk sexual behavior and pattern of condom utilization of the Gondar College of Medical Sciences Students, the consistent use of condom was 6.4% versus 13.6% in this study. The discrepancy might be

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a lack of information about consistent utilization of condom, accessibility of condom and affordability [15].

Regarding factors associated to the impact of HIV/AID intervention, the finding of the present study revealed that HIV/AIDs intervention brought impact on 70% of those participants belongs to age group 15-19 years. And the similarly age of respondents was the statistically significant effect on the impacts of HIV/AIDS intervention. Even though investigators couldn't get literature on level impacts of currently applied HIV/AIDS intervention, study on the Impact of HIV/AIDS on education systems in the Eastern and Southern Africa region indicated similar scenario which suggested that many 15-18-year-old youths, especially high-risk youth feel adapted by the formal school system and are likely to be responsive to risk reduction messages presented in a school setting. The largest impact of the intervention was seen in respondents aged 15-24 years; because these are the age groups in which the highest incidences of HIV were observed in principle [16]. This might be due to this age group are captive age group who mostly responsive to risk reduction intervention on HIV/AIDs. It may also due to they were got information at the high school before they entered university. As limitation, self-administered questionnaire used for data collection there was incompleteness of response on some important variables. This might liable to recall bias. The self-report might incur social desire for the positive aspects of study tools.

Conclusion

This study revealed that impact of HIV/AIDS intervention practices found to be low. But the finding is encourageable particularly on the confidences of exposing oneself about once own HIV/AIDS status and favorable belief towards HIV/AIDS blood test. Age group 15-19 years was found to have a statistical significant effect on the impact of HIV/AIDS intervention practices. This implies that the university HIV/AIDS intervention practices on the truck to bring some changes in the behavior of the university community especially age group 15-29 had enough information but the other age groups lose information about HIV/AIDS prevention and control concepts. Based on the finding of the study the following recommendations forwarded to Debre Markos University HIV/AIDS, Gender and Disability Office Directorate:

1. HIV/AIDS interventions should be put into practice focused target groups to supply enough information by using behavioral change communication strategies to its stakeholders and aimed to bring change on university communities.

2. The directorate should give emphasis arranging capacity building strategies of university community on the three obstacles of campus life (HIV/AIDS, STDs, and unwanted pregnancy).

3. The directorate should form community conversation to decrease sexual partners and avoid cheating in marriage or decreasing extramarital sex by focusing on married people.

4. A condom is the ultimate option to prevent HIV/AIDS spread and the data of this study also revealed that there was favorable attitude towards condom utilization but the ultimate effort is needed to bring total change on this issue.

5. To bring impact on HIV/AIDS combat the current intervention services should reach for that unreached university community and try to extend its services to peoples outside the university.

6. The office should work on university communities to involve in different club affairs including strengthening the HIV/AIDS club.

7. The university should maintain and sustain the newly imposed rules and regulations.

Conflict of Interests

The authors declare that they have no competing interests.

Authors' Contribution

Dube Jara, Zewdu Dagnew and Kassahun Ketema were participated in proposal writing, data collection, analyzed the data, and drafted the paper. Dube Jara also prepared the manuscript for publication. All authors revised subsequent drafts of the paper.

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