

Full Length Research Paper

Assessment of potential risky sexual behaviors among Dilla University students: A survey study for enhancing self- protection from human immunodeficiency virus (HIV) infection

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The aim of this research was to examine risky sexual behaviors and pre-disposing factors among Dilla University undergraduate students and to design feasible strategies to mitigate acquired immunodeficiency syndrome (AIDS) and other sexually transmitted diseases. Mainly, a qualitative method of data collection was utilized to get a number of 187 participants (181 regular students and 6 academically dismissed female students) and 44 purposively selected informants from the administrative workers. The data were analyzed manually using the thematic framework method. The results of the study revealed risky behaviors of the students as follows: having sex without condom on campus, rape attempt, loss of virginity, unintended pregnancy, abortion, lawlessness of the students, substance and alcohol use etc. Moreover, various predisposing factors for risky sexual behaviors of the students were identified. To mitigate the problems, immediate holistic and integrated efforts are needed. Moreover, this finding also recommends new approaches such as providing pre-hand orientation for the fresh university students, reviewing the existing curriculum and academic promotion policies, integration or separate inclusion of sex education, including HIV issues into university and formal school curricula and provision of special attention to female students who are being dismissed from the universities.

Key words: Vulnerability, unintended pregnancy, self-protection, risky sexual behaviors, pre-disposing factors.

INTRODUCTION

Acquired immunodeficiency syndrome (AIDS) caused by the human immunodeficiency virus (HIV) was first reported in the United States in 1981 and has now spread like a wild fire to all parts of the world; it has become a major worldwide pandemic. The wide prevalence of HIV/AIDS, is therefore, the biggest public health challenge and social problem in the world today (Cai et al., 2008). Sub-Saharan Africa remains the most severely

affected, with nearly 1 in every 20 adults (4.9%) living with HIV; they represent 69% of the people living with HIV worldwide ((UNAIDS, 2012). The epidemic is not only a health problem, but is also regarded as a major impediment to development and substantial threat to regional security (Sarker et al., 2005).

According to UNAIDS (2007), the estimated number of persons living with HIV worldwide in 2007 was 33.2

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million (30.6 to 36.1 million), over 2.5 million (1.8 to 4.1 million) people were newly infected and 2.1 million (1.9-2.4 million) people died of AIDS in the same year. This is mostly because of inadequate access to HIV prevention and treatment.

From the estimated number of death caused by AIDS in 2007, 76% occurred in Sub-Saharan Africa. AIDS remains the leading cause of mortality worldwide and primary cause of death in Sub-Saharan Africa. This shows that tremendous long term challenges lie ahead for the provision of prevention and treatment.

Studies have also shown that more than 40% of those newly infected with the disease among adults comprise young people from 15 to 24 years of age (UNAIDS, 2006), and more than 95% of these infection occur in developing countries. Sub-Saharan Africa is the home to almost 64% of the estimated 38.6 million individuals living with HIV infection (Singh et al., 2007). In this region, women represent 60% of the infected and 77% of the newly infected persons are from 15 to 24 years old (UNAIDS, 2006), indicating the needs for immediate integrated intervention to stop the spread of HIV infection among this population.

Ethiopia is one of the countries that are seriously affected by the epidemic, where nearly 1.4 million people are living with it and almost 129,000 people develop new infections every year. It is estimated that HIV is responsible for about a third of all adults' deaths in the age group of 15 to 49 years and leaves nearly three quarter of a million orphans between 0 to 17 years; there are over 30,000 new born babies with the virus (Getnet and Melese, 2008; USAIDS, 2007) cases in Ethiopia. Studies have shown that intervention on predisposing factors (any condition related to biology, behavioural, cultural, economic, demographic or personal factors etc.) that can increase the risk of involving in risky sexual behavior are the key factors to fight against HIV infection.

Moreover, studies have shown that common predisposing factors include epidemiological risk factors substance use (that is, drug use, alcohol abuse), behavioral and socio cultural factors such as poverty and gender inequality known as the drivers of HIV/AIDS epidemic (Getnet and Melese, 2008; UNICEF, 2008) that expose individuals to risky sexual behavior and HIV infection. Besides, biological vulnerability, lack of recognition of right partners among the youths etc., are additional risky predisposing factors (CDC, 2004, 2008) that need intervention for the creation of awareness and behavioral change among the community, in general, and students, in particular to curb the spread of HIV infection.

Why should a higher institution like Dilla University be involved in the fight against HIV/AIDS? One can enumerate tremendous risky behaviors that may contribute to contracting HIV infection among college students. According to CDC (1995), factors such as peer pressure, lack of maturity, alcohol and drug use and alcohol induced sexual behavior can make collage students to

exercise unprotected sex, exposing them to the risk of having HIV infection. Other studies also show that African Higher Education Institutions Responding to HIV/AIDS pandemic also discloses that factors that contribute to the risk of contracting HIV at the university level are high risky sexual behavioral patterns including sexual experimentation, unprotected casual sex, multiple partners, gender violence, *sugar daddy* relationships and prostitution on campus (Chetty, 2003; Katjavivi and Barnabas, 2003). Therefore, students of higher institutions are assumed to be exposed to many risky sexual behaviors.

Moreover, many Ethiopian adolescents that continue to engage in risky sexual behaviors are associated with low academic achievement and lack of parental communication; while individual and family-level protective factors appear to moderate the impact of risk (Land, 2004). In addition, studies also revealed that the academic achievement of the students has been significantly affected by the high school specialization than the university study (Matar and Muath, 1997; Odeh, 2007). This result confirms the need for quality high school education.

Since HIV is mainly transmitted by sex and due to no cure or effective vaccine (Cai et al., 2008), we should provide health education to the whole community in general and young people in particular. However, to bring about behavioral change, communities need all-round efforts and greater attention to give awareness on the nature of the virus, ways of transmission and means of prevention and control. These can be done through conducting orientations, sensitizations, peer education, life skill trainings, research undertakings, counseling, etc., to stop the spread of HIV and AIDS.

Rationale of the study

Ethiopia is undergoing higher education expansion and reform programs in dimensions like establishing new universities, introducing new courses, and increasing the enrollment rate of students. With clear understanding, the numbers of universities in Ethiopia are increasing with increasing number of student population, among which Dilla University is one.

The number of students is increased simultaneously, accompanied by tremendous bio-psycho social problems. Risky sexual behavior, unwanted pregnancy and abortion, gender violence, stress, academic failure, predisposing factors such as psychoactive drug addiction, and alcoholism may increase vulnerability of students to HIV infection. These factors are emerging and might be due to the age of the students (that is, puberty age), background of the students (either academic or social problems), absence of reproduction health education including HIV and AIDS and other sexually transmitted diseases; all of these factors need

holistic interventions.

Having the above facts in mind, the objective of this study is to assess potential risky sexual behaviors among Dilla University students so as to enhance self protection from HIV and other sexually transmitted diseases.

MATERIALS AND METHODS

Description of the institution

Dilla University is located at Dilla town, Gedeo Zone of the Southern Region of Ethiopia; it is 365 km South of the capital, Addis Ababa. The current Dilla University emerged from the Dilla College of Teacher Education and Health Sciences.

Since its foundation, the college has been known for producing competent teachers and health practitioners and is also recognized to be the center of excellence among the higher institutions in Ethiopia. After enjoying this reputation for eleven years, as part of the expansion of the higher education in Ethiopia, the college has been upgraded to the level of an independent university in 2006.

Currently, Dilla University is one of the fully accredited government universities, hosting a total of 15828 populations consisting of over 14,000 undergraduate students in regular, extension and summer programs under 12 schools and 1 institute; it has 1214 administrative staff and over 614 members of teaching staff.

Study design

The study was conducted on the campuses of Dilla University (that is, the new and old campuses) and off campus as well. We targeted university students for this study, because they are the group with high risk of contracting HIV infection. Data on predisposing factors and potential risky sexual behavior of the students were collected using qualitative data collection method that includes direct and silent visual observation of risky sexual behavior of the students; in-depth interview including autobiography of the dismissed female students; focus group discussion (FGD) with responsible students complemented by quantitative data collection including self administered questionnaire for the proctors, drivers and guards. This study was conducted from May to July 2009, from 6 pm to 3.30 am (12 to 9:30 local time); visual observation was done at night and the rest data collection methods were done during the day. Moreover, all the research activities were critically investigated and interpreted by the researchers.

Study participants and methods of sampling

A total of 231 consenting participants and informants were recruited for the study. These included 187 study participants (that is, 140 males and 47 female students) and 44 informants (38 males and 6 females).

The sampling techniques were based on the availability, accessibility and voluntary sampling techniques (purposive sampling) which might be due to several reasons. Primarily, the topic under investigation is highly sensitive and so many people do not want to disclose their sexual behaviors and other related manners. Secondly, it was so challenging and it took bold step to find participants who were vulnerable to pre-disposing elements and risky sexual activities. Thirdly, the problem is common to certain group of students. Fourthly, the researchers did not want to interfere directly into the privacy of the students due to ethical reasons and so they decided to maintain confidentiality of students who indulged in risky sexual behaviors.

Therefore, the involvement of the study participants was on

voluntary basis and the survey was anonymous. The selection criteria of the informants included good communicative skills, long experiences and service years in the university, ability to establish healthy relationship with the students and potential/ability to recall the past and the existing university life of the students.

Methods of data collection

The participants were classified into different occupational and social orientations. This means 187 students (that is, 181 regular students, 6 dismissed female students) and 44 informants including 19 guards, 9 drivers and 16 proctors were involved in the visual observation, in-depth interview, FGD and self administered questionnaire respectively.

In the case of visual observation, 172 participants were involved. Moreover, in the in-depth interview scheme, 6 dismissed female students were engrossed to catch information on the major jeopardizing risky sexual performances/behaviors of learners and further associated dynamics; while in the FGD, 9 participants were considered (that is, 3 females and 6 males students who are taking additional responsibilities in the university as anti-AIDS club, student council and girls club) to understand risky sexual behaviors of the students. A self administered questionnaire was provided for 44 administrative staffs (that is, guards, drivers and proctors) to collect information on the risky sexual behavior of the students. The two researchers were the primary instrument for data collection.

Visual observation: The visual observation consisted of a set of points developed to catch information on the risky sexual behaviors of the students. There are three main sections in this study: section one contains preliminary data collection (that is, with age, sex, department, year level, number of observed students, dismissed or not, type of observation), second part emphasizes narration of the incidents under observation scheme, and the last part contains major findings and conclusions.

In-depth interview including autobiographical method: During the in-depth interview, a snowball sampling technique was used and the triggering points were included, such as life history/personal experiences of the interviewees and how they passed through the university life. It included background of the respondents (age, sex, family background, high school educational status and student's passing marks, university life, department in the university, risky sexual behavior and specific life history including year of academic problem while in the university).

FGD: The guideline was aimed at collecting information on background of the respondents, risky sexual behavior of students (sex without condom, unintended pregnancy, abortion) and predisposing factors such as academic deficiency misbehavior of the students, etc.

Questionnaire: Structured and self administered questionnaire consisting of background information and behavioral aspects of the students was designed to collect information on the risky sexual behavior of the students, which were kissing, open sex, rape attempt, etc. This instrument was used in order to complement the other data collection tools.

Methods of data analysis

Research design is mainly qualitative data collection method complemented by quantitative data collection approach that provides information about predisposing factors and risky sexual behaviors of the students. Data triangulation as the major mechanism was employed in this study, so as to produce quality

research results. Qualitative data analysis was made by using descriptive approach while quantitative data were analysed using percentages and tables to meet the research objectives.

Ethical consideration

Researchers did not want to interfere directly in the privacy of the students due to ethical reasons. They decided to maintain confidentiality of the students who attempted to indulge in risky sexual behaviors; and therefore, the survey was anonymous. Furthermore, individuals who were involved in the interview were given verbal consent as a prerequisite before data collection. The target of the research was also in line with the objectives of research and dissemination office of Dilla University, which are to support the vision of the university in producing efficient, competent and HIV free graduates.

RESULTS AND DISCUSSION

Background characteristics of the respondents

A total of 187 participant and 44 informants (that is, total 231 individuals) were involved in the study (140 males and 47 female students) and 44 informants (38 males and 6 females) whose age ranged from 24 to 50. However, gender equity of the students was not maintained during sampling due to sampling limitation. Since visual observation took from evening till 3:30 AM, determination of exact age group of the study participants was not that possible; therefore, we estimated the age group of the participants to be 18 to 28 years who are supposed to be sexually mature adolescents and are capable of indulging in sexual intercourse.

Risky sexual behaviors

Data obtained from visually observed case studies and other tools confirmed the existence of risky sexual behaviors which are unsafe sexual practices among the students on and off campus. The followings verify the above (sexual behaviors) conditions.

Main results of visual observation

It was found that 38 pairs of male and female students in the two campuses were found kissing, hugging and cuddling each other in the 6 intermittent observation processes in the pocket and dark places within the university campus.

First case: A clear unsafe sexual behavior was observed as it is stated: It was on 10/11/01 E.C (that is, post exam dates) at 2.00 local time (8:00 pm) in the new campus around the shrubs (tagged as green hotel). The male and female students were from the Department of Civics and Ethical Education. The observers were rounding the dark strategic areas in the new campus to confirm the specu-

lation commonly expressed by different individuals. Some Dilla University students were getting into unsafe sexual behavior in the campus. Hence, the observers were moving along the pedestrian road; they moved from the backyard of the staff lounge to the main road, kept silent, critically investigating the surrounding with eagle eyes.

It was a mango tree having well paved green grass under it. One of the observers visualized an image lying down on the ground, and soon after instinctively, the hand light was pointed upon the image. Shockingly, two students were indulging in sex and one of the observers screamed to his colleague, saying, "Here is the drama!" Two students were acting like a thread and a needle, and immediately the second observer instinctively run to them because he thought that they may run away without getting counseling service. What a new incidence and lawlessness he observed in the university campus! The students wrinkled like millipedes to hide their identity. In fact, the observers left them to finish their sexual performance, but came back again to give counseling service. However, they were not using condom since they were afraid to collect it from the university clinic as they said. Moreover, existence of open sex in the campus was also witnessed by many of the participants and informants.

Second case: On the same day, risky sexual behaviour and rape attempt were observed. The situation is stated as follows: A group of boys were found trying to force a girl to have sexual intercourse with her, and the girl was screaming and rejecting the boys' request. The case study reads as follows.

It happened on 10/11/01 E.C (that is, post exam date) at 2:20 local time (8:00 to 8:20 pm) in the new campus called "Green Hotel". The students were from the Department of Law, the central town of Addis Ababa. The observers bumped into the students who were found making sex; harassing voices came into the auditory canal of the observers. Right after concluding the mission of counseling the students in the first case, the observers moved to the direction where hassling sounds were coming from. The observers approached a couple sitting in the dark Green Hotel; the boy unfastened his belt, and looked like he had been intoxicated due to sexual feeling or otherwise. The girl seemed to suspect the boy's actions; she had chosen forty five degree sitting, crossing her legs altogether tightly connecting with her hands. She put on trousers, and had a scarf round her neck. While the observers started asking why they were in the dark place, the boy screamed, saying: '*Echohalehu...u.u.u..elalehu! Miste nech, yetim bota yzhat ehedalehu, yefelekutin madreg eichilalehu...!*' ('I will shout 'u.u.u'. She is my wife, I can take her anywhere, I can do whatever I like') and the likes.

However, the girl was totally mute to respond to the boy as well as to the observers. Few minutes were gone to stabilize the boy. With strong communication made in between the two students, we advised them to go from

the 'Green Hotel' and go areas where there is light. Moreover, university guards were informed to make critical investigation and follow up on these students.

Third case: This observation was conducted on Saturday 06/10/01 E.C at 3:40 local time (9:40 pm). It was one of the blocks in front of the staff's building. Two students (the girl from History Department and the boy from Accounting) were talking to each other as if they were waiting for light. Marvelously, the girl over crossed on the boy, and they started kissing each other. It was dark; there was no light except at the library. The observers were around to check if there was HIV/AIDS related pre-disposing factor or not. Two students were sitting adjacent to each other in a dark place, in one of the lecture rooms in the new campus. The students were asked why they were there, and the response was due to light problem, and that they were waiting for light that comes at 4:00 local time (10:00 pm).

Another similar observation disclosed a pair of student around the registrar's office in the main campus. They said they are light phobic and wanted dark place to enjoy; however, the male student expressed his annoyance verbally by saying, "it is their right to enjoy". We were deeply ashamed of his behavior, claiming that it is their right to exercise sexual behavior in the university campus. On the same night, hugging and kissing were observed among more than 6 pairs of students at the back of the internet building as well as a non-consumable store and around the "begtera" in the main campus.

Cases reflected during in-depth interview

All of the interviewees witnessed the existence of risky sexual behaviors including open sex in the university campus as well as off campus. some of the incidences are as follows.

Forth case: One of the participants in the interview session also expressed her feelings in relation to risky sexual behaviors as:

I remember four instances that confirm the presence of risky sexual behavior in the campus. Firstly, I observed a fetus/baby aborted in the campus while it was about being eaten by a dog at the back of a multi-purpose hall (This case was also supported by other participants and even investigation trial was done to know the criminal actor). Secondly, I saw a boy in our dormitory enjoying sex with one of our friends; they stayed there for certain time while we went to 'space'. Thirdly, I had a friend again in our dormitory, who told me that she and her mate were captured by the university guard when they were having sex around begtera. She told the guard, 'just get away, please!'; taking the Id (identification card) from her back pocket".

Lastly, I know a girl from English Department who got unwanted pregnancy after joining Dilla University and gave birth around Walame area".

Fifth case: Moreover, another participant of the in-depth interview was trying to share her experiences of perilous sexual behaviors out of Dilla University campus.

I am one of the victims who faced hazardous sexual behaviors. He was a graduating student in the Amharic Department. I am from Biology Department. It was a holiday, Ethiopian Easter, and we had gone to Dilla town to enjoy life. In the middle of the night, he kidnapped me secretly and made love to me without condom. It was that day I lost my virginity and got pregnant (unwanted pregnancy). What about the probability of contracting STD including HIV?

Right after the pregnancy, we were looking for abortion from the traditional witch craft doctors around "Kofe area". We paid 50 birr to abort the fetus by drinking a kind of powder mixed with water (traditional drug), although it was unsafe and not successful. I totally became sick physically and psychosocially. I utilized further alternative during my vacation. I paid 300 birr to a doctor in the private clinic. It was made unknown to my parents, but the guy was around me. The paradox was, right after the fifth month, I understood that the fetus was still in my womb. It was determined to get away the fetus again, but medical experts and people around me advised me not to do it again since it could lead to death". What would be the fate of the new born baby?

Sixth case: During the interview, one of the dismissed girls who was working in the hotel expressed her annoyance with some of the female university students, taking one episode among many into consideration,

I know two university female students who enjoyed sex with one young investor (tagged as sugar baby) over the night in a hotel. It was a strange and risky behavior that can expose them to sexually transmitted infection including HIV.

Seventh case: Another interviewee responded,

Sex is performed during the day and night, taking a construction worker as an example. The sex performing students and the construction worker (observer) had a conversation. After observing sexual activity openly during the day in the campus, a construction worker asked the sex performers, 'what are you doing please?' The sex performers replied by taking action using mobile photo camera for memory and the episode was proved by the photo being shown to us.

Cases from FGD

It revealed the following facts with regard to the presence

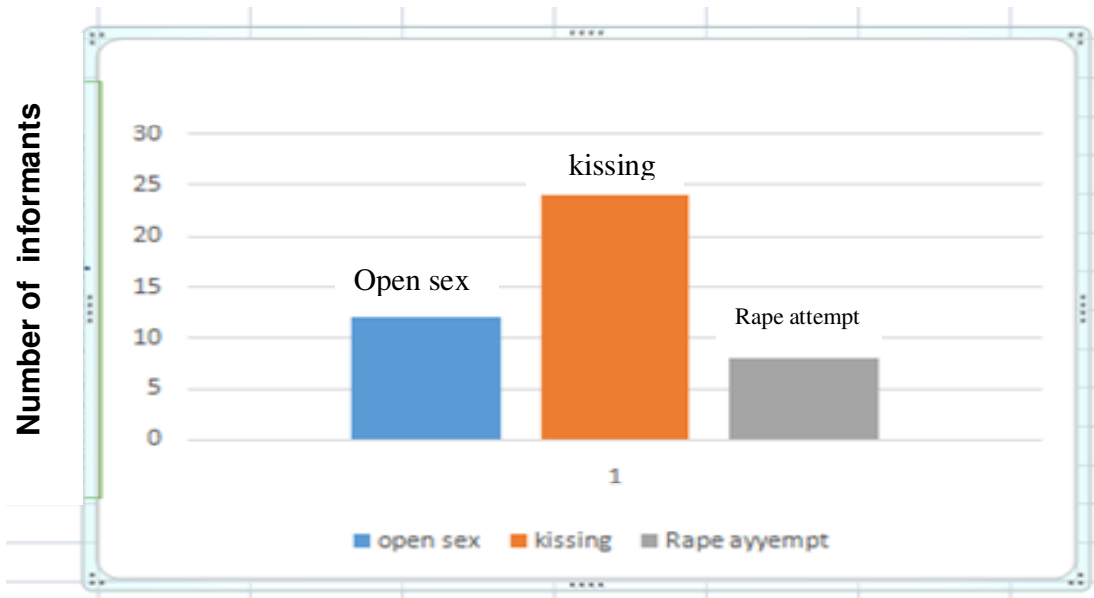


Figure 1. Types of risky sexual behaviors. From the graph it followed that, all of the informants 44(100%) replied on the presence of risky sexual behaviors of the students in the campus i.e. of the total informants, 12(27%), proved the presence of open sex, 24 (54.5%) kissing, and 8(18.2%), rape attempt, among Dilla University students, indicating the need for immediate intervention against risky sexual behaviors to fulfill the objectives of the university.

of unsafe sexual behaviors among the university students.

Case 1: When I was a first year student (that is, last year), I saw two students who put on scarf were indulging in sex around the previous History Department (the current Agriculture Department). However, later they were caught by the university police and their ID taken off; but disciplinary measure was not taken and the result was not known.

Case 2: Although I never observed open sex on this campus, kissing is like a daily meal around "BEGTERA" which may automatically lead to risky sexual intercourse.

Case 3: Right after my arrival on this campus, I saw two students around "BEGTERA" lining themselves with the wall of certain building, involving in precarious sex. I was new in the compound and shocked by the existing sexual behaviors of the students. A campus police soon arrived and asked them not to do such forbidden act in the university, and stopped them. However, a response forwarded by the students was, "we have no ears to listen to you: if you want our ID, it is at the back of our pockets; please, take it and get away soon." What were the disciplinary measures taken against this illegal act?

Case 4: Boys also attempt to have sex with prostitutes when they have money.

Case 5: I know a case where a second year student was welcoming a fresh girl student that came from a similar community. The girl arrived at the university very early and had been given a dormitory. She was alone having

no dorm mate, but the boy was helping her with all orientations about the university. While they were together, the boy asked to pass the night with her; the girl agreed because she had no information on the rules and regulations of the university. It was the first time the girl had sexual intercourse and it was confirmed that she was pregnant; her status was known right after two months. The boy was accused of committing forced sex and not using condom by the university gender office, but the appeal was aborted.

Responses based on the self-administered questionnaire

Furthermore, responses based on the self-administered questionnaire for different administrative workers (proctors, guards, and drivers) also uncovered risky sexual behaviors (kissing, open sex, and rape) among Dilla University students. The results are shown in Figure 1. The figure shows the reflection of informants on the presence of risky sexual behaviors of the students on the campus.

Major predisposing factors/driving forces

Results of visual observation and in-depth interview

Case one: It was an observation conducted on the first

year students after the second semester final exam conclusion (10/11/01 E.C). The two observers were visiting one of the local liquor houses at Dilla town from 2:30 to 9:00 local time (8:30 pm to 3:00 am); the observation result is described as follows:

There were around 92 fresh students (91 males and 1 female student) who were enjoying after their examination with traditional liquors such as "Tej, wine ("vino") and "caticala" in the traditionally decorated booth building, sheltered by bamboo. The students were sitting in groups separately, corner to corner, with some of them inside the rooms; while others were in outdoor service, drinking and smoking. A binge-drinking was the ingredient that seems to make life more meaningful to the youth groups. Dancing and singing were the positive ways of releasing emotional conflicts, including screaming, shouting, playing with condom like balloon and insulting each other (for example, "ENATIHIN LIBDA, ABATIH YIFENDA" (meaning: 'Let me fuck your mother, let your father be exploded'); talking about sex and sex related issues were the shocking and untraditional ways of getting away from emotional activities. Vomiting, losing balance and changing places and fighting each other were commonly observed. Furthermore, a remarkable scenario was that a commercial sex worker was observing the conditions in the liquor house, and some students were inclined even to communicate with the woman, being pushed by impulse due to intoxication of alcohol drinks.

Case two: The rules and regulations of the university are also considered as predisposing factors that influence students in general and girls in particular to be exposed to dangerous individual habits including risky sexual behaviors. The following instances confirm the above speculation. The verification that comes from the case study is stated as follows:

It was dated 06/10/01 E.C at 7:00:7:30 local time (1:00-1:30 am), mid-night and in the new campus; there were six students from Law Department, while the other one was from Sociology (a total of three males and four females). The two observers were tired due to the observation made for at least eight hours, starting from 5:00 p.m to 1:30 a.m, and were going home from the inside of the new campus, driving to the gate. Seven students (that is, 4 girls and 3 boys) were on heated drama with the guards to get in or not to get in. It was the rationalization that came from the guards: it is not the time to come into the university compound, rather stay somewhere else. Sheer luck permitted the observers to know the reason why they were late. Their response was that they were studying at their house and had come to the campus to sleep.

The observers were curious and skeptical to know whether they were from their home or some other places;

as a result, they were asked to tell them where their house was. One of them was not comfortable. Physically, the students looked smart (that is, well dressed, stylish, fluent etc) and from urban areas and well to do families. Despite the fact that the classroom was entirely untidy with garbage, "khat", cigarettes, and the sniff of ganja (substance abuse), we observed that there were no bed, chairs, tables; rather a single layer of blanket to chew 'khat' and study on.

Third case: Failing to choose proper time, place and condition (Tables 1 and 2) are other predisposing risky elements that may expose students to harassment and abduction. Therefore, choosing the right place and time so as to entertain or to carry out daily activities is one of the basic life skills; however, this skill is in some cases being violated by some of Dilla University students. This speculation is verified by the following facts:

This happened on 05/10/01 E.C Friday, from 1:30 evening onwards at (7:30 pm local time). The observers were moving to Dilla town so as to conduct an observation on the pre-disposing factors to HIV infection. Three elegant girls were going down taking line taxi from the gate of the main campus. One of the girls took transport while two of her friends returned back to the campus. The leader of the team started discourse with the girl on several issues including the time she managed to go to Hawassa and why she was going to there? And she pretended that she had a medical checkup early in the morning of the next day. The justification given by the girl was a little bit shocking, and to find transport that takes her to Hawassa at 1:30 local time (7:30 pm) is too late and dangerous even for males. Moreover, she traveled 90 km alone, with such reckless prevalence of car accidents and forced sexual intercourse. Anyway, she got off the car at "POST RENDEZVOUS"; looking for the mini-buses, she had to stay for at least 30 min; however, she was unable to find the mini-buses and had taken a line taxi, and disappeared from our sight.

This case observation reflects how some girls are really bold enough to dare into non-secured environments which may expose them to risky conditions like gender based violence and unwanted sexual exposure. This result of visual observation was also supported by the responses obtained from other tools as indicated. Focus group discussion revealed that six girls were coming from Dilla town enjoying weekends at 5:00, local time (11:00 pm). They were captured by the male gang groups from the town; hence, their mobiles were snatched and they were raped one by one. This shows that misusing time is a predisposing factor.

Forth case: Low academic achievement and lack of parental communication are also predisposing factors which contribute to risky sexual behaviors. This fact was reflected by girls who were dismissed from the Dilla University; they shared their autobiographic experiences

Table 1. Major dark and pocket areas in the new and old campuses.

No.	Old campus	New campus
1	“Beg tera”	Green hotel (that is, forests and shrubs)
2	At the back of internet room	Small eroded hallways in the green hotel
3	The back side of lecture hall (that is, the front and right side of computer department and counseling office)	The corridor of each class room building/block
4	The right side of non-consumable resource store house	Around the former clinic, but the present students deans office
5	Around the registrar, dark pocket area	At the back of under each large lecture halls
6	Around the left side of the main library	Leaning to the service buses in the compound
7	Around the former dining hall	Within unfinished new buildings

Table 2. Summary of the fancy time to indulge into unsafe sexual behaviors.

No.	Time (local)	Observed cases	Number of major sexual risks or pre-disposing behaviors
1	11:00-1:30 evening	4	Going to town and showing up by colleagues; however, kissing, warm upping, and sexual negotiations in the campus
2	1:30-4:00 night	8	Dating, eating and drinking alcohol in the hotels and local liquor houses; but kissing, hugging, open sex and forcing for sex/rape attempt in the campus
3	4:10-9:00 midnight	9	Dancing , fighting/quarreling each other/ with others in the night club and /or on the main streets ;conversely, kissing, warm upping and forcing for sex in the campus etc

during the in- depth interview. Their preparatory grades and challenges coupled with what they faced in the University are as follows:

I had poor grades when I joined the university and even the grades I earned were copied from my fellow friends. I was not able to resist academic competition and now, I am working in the bar/hotel because I cannot go back to my family, since they are poor and expecting money from me. This idea was shared by other three girls who faced academic dismissal. They said, “their preparatory passing marks to university were 140/500, 226/500 and 265/500 and these marks were also copied or guessed”. This indicates the needs to reassess the existing promotion policy of the ministry of education.

Professional and ethical problems also root up from the university among few lecturers and

graduate assistances. The following incident proves this fact:

Another girl boldly explained “ *I took all the exams, but a teacher made me not to complete my education and this was due to my refusal to “his unprofessional request “. Therefore, I was dismissed mainly because my teacher tried to harass me”.*

Case five: The girl who was a participant in an in-depth interview witnessed that girls do share their mobile addresses with the rich merchants “sugar daddy or baby“ using the hotel waiters as intermediate actors for transacting sexual communication. Other predisposing factors which we observed also include: non- dormitory life of the students (living off campus), peer pressure, lack of maturity and biological vulnerability; and these factors may expose them to risky sexual

behavior.

Major hotspots and periods/time or occasions that expose students to risky sexual behaviors

Data obtained from different mechanisms including our visual observation revealed the time and places when and where risky sexual behaviors occur. Moreover, our visual observations also verified that dark and pocket areas in the campuses are highly preferred by students for entertaining sexual behaviors. Tables 1 and 2 depict the location of hotspots and appropriate time for enjoyment. If not used appropriately, time is also another predisposing factor which influences students to exhibit risky sexually behaviors. To verify this statement, the following facts (Table 2) are considered. Moreover, favorable conditions/days or occasions when

students indulge in risky sexual behaviors mainly include:

1. Weekends: With regard to the extent weekend celebrations make learners to indulge in unwarranted sexual and related behaviors, the following incidents validate the actuality. For example, the case of the girl who intended to go to Hawassa as pretence for medical checkup was on a Friday (that is, 05/10/01 E.C).

"It is better for me to get out on these days (that is, Friday, Saturday and Sunday) since I am busy on the rest of the days with all academic duties". (Response from the student).

The interview conducted with the first year student from Anthropology Department in the new campus revealed that:

"You just need to visit "Molash Tej Bet", a traditional liquor house, on Saturday to examine how far students get ducked into "Tej"; I am also one of the drama actor".

2. National and cultural holidays: Holidays are more favorable for the students to indulge in risky sexual behavior, which may lead to HIV infection and related problems. The following cases obtained from the interview verify these conditions:

A student was raped by her boyfriend, lost her virginity in the process, got pregnant, tried to abort the baby but gave birth. She was finally dismissed from the school. These happened on Ethiopian Easter.

3. Post-exam dates: Learners seem to engage in sex and related issues during post-exam days; the following information obtained from observation proves this statement.

About 92 first year students were seen at "Molash Tej Bet" on the final date of their second semester. Furthermore, there was open sex in the "Green Hotel"; another boy was trying to rape a girl; all took place on the same date (Friday, 10/11/01 E.C).

4. Pre-exam days (that is, right after their arrival on campus in every semester) are considered as one of the factors that cause students to engage in risky behaviors, and the reflection obtained from the interview confirmed the prevailing fact.

A big gap was observed between the time of academic new year, semester break, and when the actual teaching-learning processes start; this gives the students chance to indulge in risky sexual behavior and other risky habits like substance use such as drinking, smoking, chewing using hashish etc.

4. Vulnerable academic year students: Informants includ-

ing proctors, drivers and guards say that the tendency of students' involvement in undesirable risky behaviours may vary among different level of students. The following facts depict which level of students is most vulnerable to HIV and AIDS related misbehaviors and associated misconducts?

All the informants 44(100%) replied that students from all academic the levels were vulnerable to undesirable sexual behaviors. However, of the total informants, 19(43.2 %) say all academic levels were more vulnerable, whilst 8 (18.2%) say first year students; 7(15.9%), second year students; 10 (22.7%), third year students. Moreover, the total data triangulation indicated that first year students were more vulnerable to risky sexual behaviors than those in other levels.

Discussions

Risky Sexual Behaviors

Different instruments/tools exploited during the data collection showed risky sexual behaviors and predisposing factors among the undergraduate students of Dilla University. Risky sexual behavior included sexual initiation (hugging, kissing etc.), rape, sex without condom in the campus, loss of virginity, choosing multiple sexual partners (for example, sexual experimentation with sugar baby/ daddy in a hotel), unintended pregnancy, abortion and sex with prostitutes. This finding is reflected in similar studies carried out in Ethiopia, which showed, among the respondents, 267(26.9%) had had sexual intercourse. Mostly, 75.6% started sexual intercourse during their secondary schools; and among whoever had sex, 51.0% had sex in the last 12 months and 28.3% had multiple sexual partners. Consistent condom use with non-regular partner in the last 12 months was 69.1% (Gurmesa et al., 2012). There are variations in the findings due to methodological differences in the data collection.

Another similar study also was conducted on the pattern of the risky behavior among undergraduate students. It showed that among the respondents, about 355 (28%) students reported to have had sexual intercourse. Most of the students, 271, (77.2%) who reported to have commenced sexual intercourse had their first sex with a girl or boy and 60 (33.5) had sex with two or more partners. Six (2%) male students reported having had first sexual intercourse with commercial sex workers. Forty three (22.8%) reported to have had their first sexual intercourse after they joined the university while twenty two (6.4%) of the sexually active students reported to have practiced sex with the same sex partner from which 17 (5.7%) were males and 5 (11.4%), females. Five female students (12.2%) reported that they had been raped; one of them was raped after joining the university. Among the students reported to have ever had sexual intercourse, 220 (64.1%) had used a condom at

least once. Less than half (116, 32.7%) had used condoms during their first sexual encounters (Tariku et al., 2012).

In addition to these findings, studies have also shown that sex initiation and exercising start at early ages among students including collage students, worldwide (CDC, 2004). In Ethiopia, studies have also shown that in a school of youths (15 to 19 years), about 10% had premarital sex, and of those who were reported to have had sex, 40.6% had sex before 15 years (BSS II, 2005); while among college students in Dessie, 48.3% of males and 25.9% of females were reported to have had sex with two or more sexual partners (Yimer, 2007). Moreover, our findings included high risky sexual behaviors (unprotected sex sexual experimentation on the campus and out- off the campus, and multiple sexual partnerships) which could expose university students to health hazards such as sexually transmitted infections (STI) including HIV, unintended pregnancy and abortion. In support of our study, other studies conducted on African Higher Education Institutions Responding to HIV/AIDS pandemic also disclose that contributing factors to the HIV risk at the university level are high risky sexual behavioral patterns including sexual experimentation, unprotected casual sex, multiple sexual partners, gender violence, *sugar daddy* relationships and prostitution on campus life (Chetty, 2003; Katjavivi and Barnabas, 2003).

The impact of STI infection is also magnified by its potential to facilitate the spread of HIV infection (WHO 1999; UNAIDS, and WHO 1999)). In addition, a study conducted on the prevalence and associated factors of sexually transmitted infections among the undergraduate students of Wolaita Sodo University, in Southern Ethiopia shows high prevalence of sexually transmitted infections (STIs) (19.5%) among the university students who had risky sexual behaviors (Bereket et al. 2013). This result clearly indicates the vulnerability of the university students to HIV infection which demands holistic intervention including effective sex education for students in Ethiopia and elsewhere. Our finding has been reflected in studies conducted in other countries. The study conducted among university students in Madagascar in 2000 revealed that 80% of students have had sexual experiences (Rahamefy et al. 2008) and the study conducted on Nigerian university students, 76.8% have had sexual practices (Okafor and Obi, 2005). Moreover, the study conducted among Slovak University students shows that among 832 students, those with sexual experiences were 62%; inconsistent condom use has been the most prevalent risky behaviour (81% in females and 72% in males (Ondrej et al., 2009). The overall results show that students start sex from their early ages; however, risky reduction measures are not reliable.

Our finding also showed that first year students were more vulnerable to risky sexual behaviors than those in other levels. This finding is supported by other studies which explain that most vulnerable students with low

retention in all institutions of higher education are the first-year students, who are at greatest risk of dropping out of school in the first semester of study or not completing their program /degree on time (Horstmanshof and Zimitat, 2007., Noble et al. 2009). This indicates that the first year students are under different pressures and these pressures may expose them to risky sexual behaviors. Another study conducted on first year students also shows that first-year students are most vulnerable to dangers of alcohol, exposure to alcohol-related injuries or death, getting in trouble with the police or the university, getting into a fight, doing poorly on a test, missing class, or being taken advantage of sexually (Eagle, 2006); these may expose them to risky sexual behaviors. Therefore, the first year students urgently need more attention of the universities and their parents to attain their objectives.

The overall results on risky sexual behaviors demand special attention to support students in high schools, colleges and universities, including private colleges. This will bring change on risky sexual behavior to mitigate the spread of HIV infection. This action also needs bold and feasible intervention such as integration or inclusion of reproductive health and sex education into formal education as part of biological sciences at primary and secondary levels and common course at the university and college levels, to bring about behavioral change among the students.

In support of the above rationale, more than 70 developing countries now mandate life skills based education with HIV prevention component in national school curricula (UNICEF, 2007); and therefore we need to include sex education in our school curricula.

Predisposing factors to risky sexual behaviors

Our study also showed various predisposing factors including substance use, misbehavior of the students, loose regulation of the institution, misuse of time and dates or occasions, low academic achievements and lack of parental control, professional and ethical problem of few instructors and graduate assistants, address exchange with investors (*sugar daddy and baby*) by some female students to have transactional sex, out- off campus living, peer pressure, dark and pocket areas on campus, night clubs(red light houses), traditional liquor houses, and biological vulnerability of the students. This finding has have been partly reflected in similar study carried out in Ethiopia. This study result shows lack of parental control, being in the youth age group (immaturity), living out-off campus, substance use, peer pressures, campus and outside environment and low income level are the predisposing factors for risky sexual behaviors among Jimma University students in Ethiopia (Gurmesa et al., 2012). Our finding is also in conformity with other study results. According to Getnet and Melese

(2008), these predisposing factors are the driving forces that may enhance the vulnerability of community in general and students in particular to HIV infection. Therefore, we need to prioritize working to reduce the behavior of vulnerability of students to HIV infection.

Effects of peer pressure, lack of maturity, dark places and substance use

In line with our results, other studies carried out among college students in Ethiopia also show substance use. For example, in 2007, the study carried out to assess knowledge, attitude and practice on reproductive health problems among Jima University and Jima Teachers Collage indicates that among the respondents, 46.4 percent used to drink alcohol, 25.1 percent used Khat (chewing chat), 14.9 percent used tobacco, and 10.9% used shisha (Tilahun et al., 2007). This shows the involvement of students in using substance like alcohol, and they are more likely to engage in a high risky behavior. Moreover, attendees who were tested during HIV counseling and testing (HCT) in Addis Ababa (Ethiopia) used alcohol and are more likely to be HIV positive than those who are non drinkers.

In line with our study, other studies conducted in other countries also show predisposing factors that are associated with risky sexual behaviors; they are mainly substance use including alcohol, peer pressure, lack of maturity and dark places. According to CDC (1995), factors such as peer pressure, lack of maturity, alcohol and drug use and alcohol induced sexual behavior can make collage students to involve in unprotected sex, exposing them to a risk of HIV infection. Our studies also showed that students were using hotspots (risky conditions) such as dark places, night clubs,(red light houses), traditional liquor houses, where they enjoy kissing each other, drinking alcohol and perform unprotected sex (non use of condom),which may adversely expose them to risky sexual behaviors. This result is also in line with the results stated by the Leigh and Stall (1993), where they show that both causal and chronic substance users are more likely to engage in a high risky sexual behavior such as unprotected sex when they are under the influence of drug or alcohol abuse. Moreover, recent study also showed that respondents who attended night club and abused alcohol in the last three months were about two times more likely to have had sexual intercourse as compared to non- attendants in this study (Gurmesa et al.2012).

In addition to this report, studies conducted in South Africa also reported that low lighting (i.e., dark places), seductive (that is, attractive or tempting) music, unisex toilets, and lack of condom use instigated sexual intercourse, when combined with heavy alcohol consumption. These in turn contribute to the incidence of unsafe sex (Seloilwe, 2001; ICAP, 2009). There are other several studies that have been conducted among university

students with the results showing that drug use, alcohol abuse, sexually transmitted infections, behavioral and socio cultural factors are predisposing factors called the drivers of the HIV/AIDS epidemic (Getnet and Melese, 2008)

These risky behavioral activities of the students do not only hinder the vision of the university, they are also potential threats to life of the students in particular and country in general; and hence we need to intervene immediately to bring about behavioral changes of the students.

Out- off campus living style and lack of choosing the right place and time

Our study also showed "out- off campus living behavior/lifestyle "of the university students and we visually observed that they were vulnerable to risky sexual behavior, that may expose them to HIV infection. In line with our study, another study on HIV sero-behavioural study in six universities in Tanzania also shows overall, male students and female students who are living outside university campus (either renting private apartment or residing at university hostel outside university campus) have relatively higher risks including prevalence of HIV infection than students who are either living with guardian/parent or living at the university campus (Abu et al.2010).This result shows universities need to act like guardians/parents of the students to get rid off or to reduce vulnerability of the students to HIV infection due to living out-off the campus. Moreover, choosing the right place and time to entertain daily activities are considered to be the basic life skills to lead a positive life. However, our visual observation clearly indicated that this skill in some cases was being violated by some of the university students, where non- dormitory group of students (both males and females) who live away from their parents enjoy their life, indulge in substance use including *shisha* and live together free life. A girl unbelievably dared to go to Hawassa alone at 1:30 local time ((evening) (7:30 pm) and non dormitory students ventured to enter a new university campus at 7:30 local time (1:30 am). These show violation of place and time factors and open sex in the university campus were some of the way students violated regulations, misused time and place. This result also indicates that university students who are away from parental control and living out- off campus are more vulnerable to HIV infection. Therefore students who live out- off the campus need the attention of the university authorities and be attached to their parents for them to be protected and achieve their academics goals.

University regulations and misbehavior of the students

Our study also showed misbehavior of the students:

misuse of time /dates or occasions, substance use, sexual experimentation, risky sexual behavior (kissing, engaging in open sex in the university campus), ignoring the rules and regulations of the university etc. Few instructors and graduate assistants had professional and ethical problem probably due to loose regulation of the university. Universities have a vision to produce competent and HIV free graduates in the long run and this goal totally depends on how the universities manage the behavior of the students in the campus. Therefore, if the rules and regulations of the university are not well managed they can be considered as a predisposing factor that influences behaviors of the students. For instance, we have observed the following instances that confirm the above assertion.

Having sex in the university campus, misuse of time/dates, intoxication, dismissed male student staying in girls' dormitory for two months etc are practiced in the university campus. This indicates that the rules and regulations of the university are loose and this needs reassessment of how the university manages the students.

Moreover, measures against these illegal practices were not taken appropriately. This strengthens the lawlessness of the students, leading to risky sexual behaviors; and also encourages exposure to HIV infection. Furthermore, a focus group discussion and in-depth interview showed that academic calendar is also considered as a pressing factor (stressful). This means the gap between entrance and academic resumption of the semester, mid exam and final exams in many cases overlaps with each other. This likely speeds learners' academic failure which in turn makes them idle; and as a result, they indulge in precarious sexual behaviors.

Furthermore, results of the focus group discussion and the in-depth interview have clearly indicated that the university campus lacks fence, male and female dormitories are close to each other, absence of toilet rooms and water supply in the new campus, unknown individuals get into the university and likely harass girls, while they study in the space during the middle of the night; all these may initiate lawlessness of the students in the campus. Moreover results of the in-depth interview showed unethical problem of few instructors and graduate assistants who approach female students for sex in exchange for improved grades, which is unethical as well as unprofessional behavior. The findings above are in accord with previous results reported by *Goyette et al.*(2000) who stated that "the increase in student misbehavior is associated with habit of ignoring rules, due to higher attrition rates, academic failure, substance abuse as well as poverty and unemployment in adulthood". Another study also shows some students act ethically because they are worried about being "caught" by faculty members; others choose more ethical behavior because they realize that dishonesty/ misbehavior harms them, their instructors and other students (Bennett, 2005). This result is also supported by other study result

which expresses that even though policies/rules are in place in some institutions, some students clearly do not feel that they are protected and guided by rules (Monita et al.2013).

Other studies also show poor professional conduct prevails across Sub-Saharan Africa and South Asia. For instance, education officials in Malawi face exorbitant numbers of disciplinary cases related to teachers; they are sexual misconduct with pupils, fraud, absenteeism, substance abuse (drug and alcohol) and stealing of teaching and learning materials (plagiarism) (Bennell and Kwame, 2007). Other similar study on the misconduct of the teachers reveals that in some cases male lecturers may feel they have the right to have sex with the female students, and a student reporting sexual harassment would likely experience negative consequences (Morley, 2011). However, when lecturers harass students for sexual favors, a risk of greater vulnerability for unprotected sex and sexual coercion exist more than in situations in which females approach lecturers for sex in exchange for improved grades (Monita et al.2013). Such misconduct is ultimately expected to account for students' misfortune, low academic achievement and returns to education are observed in developing countries (Oyelere 2010).

These results indicated risk of low academic achievement, misbehavior of students and few lecturers and graduate assistants can spoil the objectives of the universities. Therefore above all, instructor/lecturers and graduate assistants should be guided by professional ethics to achieve the objectives of the students as well as the universities. Students need to target their vision and know they are protected and guided by the rules of the universities. Moreover, rules and regulations of the universities should be tight based on convention to achieve the goals and objectives of the universities as well as the students.

Effects of poor academic background of the students

Furthermore, Focus Group Discussion and interview showed students have had poor grade achievements, before entering the university. Be it in the high schools or in the university, the reasons behind low academic performance are more likely due to lack of study skills and concentration during reading, lack of confidence during examination, absence of experiences to succeed in academics; poor reading habit, peer pressure, lack of time management skills, low self-esteem or totally lack of self-esteem etc; and these factors may be considered as predisposing factors. Therefore, these predisposing factors may cause students to lose their self reliance and become dependent on others, which could expose them to dependency, rape, dangerous sexual harassment and other related risky behaviors.

Academically weak students in many cases are also subject to sexual assault by few instructors, senior

students, investors, (i.e., investors or commonly tagged as “sugar daddies or babies”). This has also become a factor that prompts learners to resort to unwanted sexual and related activities, and for that matter they do not negotiate sexual concerns, and even show rejection to concerned bodies

Our results also showed that low academic achievement may lead to risky sexual behaviors including life of prostitution. Results from in-depth interview of dismissed female students showed that those who were dismissed from the universities were engaged in unsatisfactory business including hotel life (prostitution). This result is in line with other study result which reveals that many Ethiopian adolescents continue to engage in risky sexual behaviors associated with low academic achievement and lack of parental communication; while, individual and family-level protective factors appear to moderate the impact of risk (Land,2004). Moreover, studies also revealed that academic achievement of the students has been significantly affected by the high school specialization rather than the university study (Mater and Muath, 1997, Odeh, 2007) and this confirms the need to improve high school education. Moreover, Sujit et al. (2006) show that test competence is an important factor for distinguishing students with low vs. high academic performance. Therefore, enrolment of students at each grade level, including the universities should be based on test competence so that the student enrolled can cope with the demands of the courses at different schools and university levels.

Predisposing factors identified in the university campus and off the campus could increase the vulnerability of the students to risky sexual behaviours that may lead to HIV infection and other sexually transmitted diseases. Female students who were dismissed from the universities due to academic problem are running unsatisfactory life including commercial sex work. Therefore, since university students are the basis of the future and represent the hope for an HIV/AIDS free generation, universities should design feasible strategies to take urgent risk reduction measures such as behavioural change communication (BCC) interventions. Moreover, dismissed female students are high risky groups and they need to: (a) Be engaged in income generating activities (IGA) (for only the girls who will voluntarily want to perform this activity); (b) re-attach themselves with their family members (after counselling from their parents and assessing their willing) and; (c) capacity building: Re-admitting them in college or university, provided that if the dismissed female students have academic potential to do so to save their livelihood.

CONCLUSIONS AND RECOMMENDATIONS

We observed serious risky sexual behaviors among the students which may expose them to sexually transmitted infections including HIV. To mitigate the problems, holis-

tic and integrated efforts including that of policy makers, university officials, students, their parents and the surrounding community are needed to underline the sensitivity and seriousness of the situation. . Moreover, this finding also recommends new approaches such as providing pre-hand orientation for the fresh university students, reviewing the existing curriculum and promotion policies, integrating or separate inclusion of sex education including HIV issues into the university and formal school curricula, and provision of special attention to female students who are being dismissed from the universities.

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