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Assessment of Risky Sexual Behaviors among Arba Minch University Students, Arba Minch Town, Snnpr, Ethiopia

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Abstract

Background: Youth fertility regulation and pregnancy prevention are among the major health care challenges of the 21st century in developing and developed countries. Unintended pregnancies and sexually transmitted infections (STIs) are the main consequences of adolescent risky sexual behavior. There is inadequate information among adolescents and youths about their reproductive health especially in developing countries.

Objective: The main aim of this study is to assessing risky sexual behaviors and associated factors among Arba Minch University students.

Methods: Institution based quantitative cross-sectional study was carried out among 427 randomly selected Arba Minch University undergraduate students from May 29 to 30, 2014 using self-administered questionnaire. Data was entered using EPI data version 3.02 and analysed by using SPSS version 16.0. To ascertain the association between dependent and independent variables, binary logistic regression was performed and variables with p-value of less than or equal to 0.25 at binary were entered into multivariable logistic regression analysis. Hosmer-lemeshow goodness-of-fit with stepwise (backward elimination) was used to test for model fitness. Variables with p-value of <0.05 at multivariable regression were considered as statistically significant. Finally, the result was summarized using text and tables.

Results: Among 404 participants, 127 (31.4%) reported having at least one risky sexual behavior in their lifetime. Risky sexual behavior was high among respondents who were engaged in non-health field of study (AOR [95%CI] = 2.87[1.86-4.3]), who were rural residents before joining the campus (AOR [95%CI] = 1.57[1.03-2.4]) and who didn't discuss sexual issues with their parents (AOR [95%CI] = 1.98[1.29-3.03]). In addition, risky sexual behavior was higher among respondents who use khat (OR [95%CI] =2.8[4.59 -17.63]), who drink alcohol (OR [95%CI] = 3.94[15.4-62.16]) and who smoke cigarette (OR [95%CI] =2.2[7.92-66.71]).

Conclusion and recommendations: The prevalence of risky sexual behavior among Arba Minch university students was high (31.4%). Therefore, university should incorporate health education to its curricula to prevent students from developing risky sexual behaviors and factors associated to it like, substance abuse and its consequences.

Keywords: Risky sexual behaviors; Adolescents; Arbaminch University

Introduction

Adolescents constitute the largest percentage of people in the developing countries, especially in sub-Saharan Africa. Promotion of safe sex and encouragement of contraceptive use would contribute immensely to the reduction in sex-related morbidity and mortality caused by teenage pregnancy, abortion, HIV/AIDS and at the same time reduces the population explosion [1]. To do this however, there is the need to understand their sexual behaviors in order to design effective interventions [2]. Risky sexual behaviors, including early sexual intercourse, unprotected sex, multiple sexual partners and non-contraception use can expose adolescents to sexually transmitted diseases (STDs) and early pregnancy [3]. For most youth, college represents a shift towards greater independence from home setting and an opportunity to form new friendships, and for several, an opportunity to experience sexual relationships, and have multiple sexual partners [1,4]. Early and risky sexual activity has serious short and long-term health-compromising consequences [5]. Some young women with unintended pregnancies obtain abortions many of which are performed in unsafe conditions that results in school dropout, depression and career disruption. Consequently, this does not only affect the lives of the adolescent mothers but also those who interact with them, their families, peers and those who work in health and education institutions as well as social welfare and other sectors [6-9].

In Sub Saharan Africa (SSA) youth sexual behavior has been a central issue because sexual activity is increasing in many African countries and poses a serious risk [9]. University students are more exposed to risky sexual behaviors due to the fact that they are away from their family and free from parental behavioral prohibitions [10, 11]. According to a survey conducted among students from six Ugandan universities, only 51% of the respondents used a condom during their last sexual intercourse, 24% have had more than one

sexual partner in the last 12 months, 79% have had a non-regular partner, and 10% had STI-related symptoms. The study further reported that 6% of respondents in the age group of 15 to 19 and 13% in the age group of 20 to 24 experienced pregnancy and 4.2% of those who experienced pregnancy were exposed to induced abortion. [12].

As seen in many developing countries, substance misuse is becoming a growing problem in Ethiopia. Moreover, Students and staff at institutions of higher education are considerably at high risk of substance use. Study conducted in Haramaya University revealed that 53.8% reported having used at least one substance in their lifetime. The most commonly used substance was alcohol 41.7% followed by khat 30.3%. Out of the total respondents, 33.5% of students had sexual experience, 11.5% had multiple sexual partners in the last three months and 16.3% of males have sex with commercial sex workers. [13]. Female students in higher learning institutes in Ethiopia face many problems that pose a challenge to the successful completion of their studies. And also they lack sufficient knowledge on their reproductive health. In addition to the above problems, there is little guidance and counseling for students who find it difficult to cope with the new academic and social environment in higher institutions in Ethiopia. [2].

Despite the growing health need of youth, health service in developing country in general and in Ethiopia in particular are not prepared to provide appropriate care due to inadequate awareness of adolescent health needs and inadequate training and capacity of service providers [2]. So, the main aim of this study was to assess risky sexual behaviors and associated factors among Arbaminch University students and the result of this study will be used by different organizations in the country that works on adolescent and youth's reproductive health, to develop policy, strategies and programs to improve the reproductive health of those vulnerable groups.

Methods and Materials

Study design and setup

Institutional based Cross-sectional study was conducted from May 29/2014– June 14 / 2014 in Arba Minch University; which is one of the oldest universities among 32 universities in Ethiopia. It is located about 505 kms from Addis Ababa in the Gamo Gofa Zone in Arba Minch town. The university had 16054 regular under graduate students. Of the total 11522 students were male ,4532 were females and 494 post graduate students. The University consists of the following academic units; Arba Minch Institute of Technology (AMIT),College of Natural Science, College of Business and Economics, College of Medicine and Health Science, College of Social Science and Humanities, and College of Agricultural Science. The source population for this study was all AMU students, who were attending regular undergraduate program and the study population was sampled regular under graduate Arba Minch University students who fulfilled the inclusion criteria.

Sample size determination and sampling procedures

The sample size was calculated by using single population proportion formula, by taking the following assumptions: prevalence of pre-marital sexual practices among Gondar College of Medical science students of 56 % (P=56%) [18], desired precision of 5%, 95% confidence level and 10% non-response rate. Then the final sample size was computed to be 427 students.

Multistage sampling method was used. First, Arbaminch University was selected purposively by assuming that, all university students in Ethiopia are homogenous. Then, the university was stratified as health campus and non-health campuses. The health campus was selected purposively and from four non-health campuses, Agricultural science campus was selected randomly by lottery method. Then from agricultural science campus, horticulture and animal science departments and from health campus, medicine department were selected by lottery method. Then the allocated sample was proportionally distributed to the selected departments and year of studies based on number of students. Finally students were selected from each selected departments and year of study by simple random sampling method by taking list of undergraduate student which belongs to selected departments of all years from the office of the registrar. Finally the selected students filled the questionnaire.

Data collection tools

Data were collected by facilitator guided structured self-administered questionnaire adapted from WHO sexual and reproductive health questioners [14-17]. Facilitators were university instructors who received training on the study procedures. Two facilitators per class room were assigned to facilitate the data collection process. To keep the quality of data, the questioner was pretested on 5% of the sample at Wolayita Sodo University and data collection was closely monitored. Finally data were sorted, checked, entered into the computer and cleaned for analysis.

Measurements

The following operational definitions were used: Risky sexual behaviors refers to respondents who were reported having penetrative vaginal sex without using condom (inconsistently condom use) with any partner other than regular partner, having multiple sexual partners, starting sexual intercourse before 18 years, forced to have sexual intercourse and sex with commercial sex worker. In this study, respondents who engaged into at least one of the above behavior were considered as having risky sexual behavior and those who were not engaged into non-of the above behaviors were considered as no risky sexual behavior. Regular partner refers to a sexual partner either spouse or one who lives together within the 12 month prior to study. Inconsistent condom use refers to response option other than always (like rarely, never used and occasionally) about frequency of condom use during sexual contact.

Sexual intercourse refers to penetrative sex either vaginal or anal. Type of first partner refers to married/cohabiting, regular partners (boyfriend/girlfriend) not living together, casual partners, and paid partners or sex workers and stranger/ other partner.

Data processing and analysis

Data were entered into EPI data version 3.02 and exported to SPSS version 16.0 for analysis. Frequencies of different variables were determined and followed by cross tabulations to compare their frequencies. Presence of multicollinearity was assessed among predictor variables and no multicollinearity was detected. Binary logistic regression was conducted for dependent and independent variables and crude odds ratio (COR) with 95% confidence interval was estimated to assess the association between dependent and in dependent variables. Then variables with p-value of <0.25 at binary logistic regression were taken into multivariable logistic regression

analysis to assess their association with risky sexual behavior. Hosmer-lemeshow goodness-of-fit with stepwise (backward elimination) was used to test for model fitness. Adjusted odds ratio (AOR) with 95% confidence interval was estimated to assess the presence of association at multivariable logistic regression. Variables with p-value of < 0.05 at multivariable logistic regression were considered as statistically significant predictors of risky sexual behavior. Finally, the analyzed data were summarized using text and tables.

Ethical consideration

Letter of permission and cooperation was taken from the department of public health, college of Medicine and Health Sciences, Arba Minch University and it was given to respective departments included in the study. Information on the study was given to the participants, including purposes and procedures, potential risk and benefits, So that, they provide accurate and honest response. It was explained that participation is voluntary and that private information would be protected. In order to protect the confidentiality of the information, names or ID were not included in written questionnaires. Informed consent was obtained from each participant.

Results

Socio demography

Out of the total 427 students participated in the study; questionnaires from 404 respondents were considered for analysis making a response rate of 94.6%. Respondent's age ranges from 18-24 years with mean age of 21 and SD of +2.9 years. From the total number of respondents 251(62.1%) were health campus students while the rest 153(37.9%) were non health campus students. Two hundred ninety eight (73.8%) were males. The previous residence for majority of respondents, 222 (55%) were from urban. Only 52 (12.9%) of the respondents discussed often about sexual issue with their parents whereas, one hundred six (26.2%) discussed occasionally and 246 (60.9%) had never discussed. From the total number of respondents 348(86.1%) of them get income from their parents, 22(5.4%), 25(6.2%), and 6(1.5%) of them get income from humanitarian organization, relatives, and friend respectively. From the total participants 261(64.6%) of them had attended religious services every day, 116(28.7%), 13(3.2%), 9(2.2%) had attended religious services once a week, once a month, once a year respectively. But the rest five (1.2%) had never attended religious services (Table 1).

Characteristics	Frequency	Percent (%)
Sex		
Male	298	73.8
Female	106	26.2
Age group		
18-20	228	56.4
21-23	113	32.9
24-26	43	10.6
Marital status		
Single	378	95.8
Married	17	4.2
Year of study		
First year	186	46
Second year	139	33.7
Third year	39	9.7
Fourth year	43	10.6
Fathers educational status		
Illiterate	65	16.1
Read and write	99	24.5
Grade 1-4	25	6.2
Grade 5-8	49	12.1
Grade 9-12	53	13.1
Diploma and above	113	28
Mothers educational status		
Illiterate	97	24
Read and write	72	17.8
Grade 1-4	43	10.6
Grade 5-8	34	8.4
Grade 9-12	82	20.3
Diploma and above.	76	18.9

Table 1: Socio demographic characteristics of Students, AMU, 2014

Out of the total respondents, 131 (32.4%) of students had sexual experience. From sexually experienced respondents, 47 (35.9%) of them had their first sex before joining the university at preparatory school level, while 33 (25.2%) of them had their first sex after joining university and the rest of them started at elementary school 25 (19.1%) and 26 (19.8%) of them started at high school . From the total respondents who had practiced sexual intercourse 57 (43.5%) of them had their first sex before age of 18 years while 74 (56.5%) of them had their first sex at above or equal to 18 years which ranges from 13 to 24 and mean age of 16 and SD of +2.3 years. Regarding to the reasons for initiating sex, majority of the respondents 109 (88.6%) initiated based on their willingness like, fail in love 63 (51.2%), Promising word from partner for marriage 30 (24.4%), curiosity or to see what it is 16 (13%) and 22 (11.4%) initiated without their willing like, peer pressure, raped and sex for exchange of money. Majority of sexually experienced students 98 (74.8%) had their first sex with their girlfriends/boyfriends, 18 (13.7%) with relatives, 8(6.1%) with commercial sex worker, 4 (3.1%) of the respondents had their first sex with their teachers and the rest 3 (2.2%) with others.

From sexually active 131 students, 116 (88.5%) had used condom at least once in their life time during sexual intercourse. From them, only 31 (26.7%) used it always during sexual intercourse; 25 (21.6%) used occasionally and 60 (51.7%) used rarely during sexual intercourse. From those sexually active students, 125 (95.4%) of them had practiced sexual intercourse in the last 12 months. From these students, majority

of the respondents 103(82.4%) practiced with their fiancé, 11 (8.8%) of them with commercial sex workers, 8(6.4%) with their teachers, and the rest 3 (2.4%) with others. From 125 students who had sex in the past 12 months, only 31 (24.8%) of them used condom always during sexual intercourse, but the remaining 44 (35.2%), 37 (29.6%), 13 (10.4%) used rarely, occasionally and never used respectively. Respondents were able to cite diverse sources of condom including shops, 53 (46.8%), clinics, 41(35.7%), pharmacy, 18 (15.7%), others, 3 (2.6%). Among 94 students who had sex without condom in the past 12 months 32 (34%) reasons not easily accessible, 17 (18.1%) trusting partner, 16 (17%) not comfortable, 13 (13.8%) partner projection, 10 (10.6%) reduce sexual pleasure and 6 (6.4%) embrace to buy were the predominantly reported reasons for non-use of condom.

Factors associated with risky sexual behaviors

Multivariable logistic regression shows that, types of field attended, place of residence and discussion with family shows significant association with risky sexual behavior. Students who study non health field were 2.8 times more likely to engage into risky sexual behavior than students who study health fields (OR [95% CI] = 2.87[1.89-4.43]) and those students who came from rural areas were 1.57 times more likely to engage into risky sexual behaviors than those who came from urban areas (OR [95% CI] = 1.57[1.03-2.4]). Students who didn't discussed about sexual issue with their family were almost two times more at risky sexual behavior than those who discussed (OR[95%CI] =1.98[1.29-3.03]). Alcohol drinking, khat chewing and cigarette smoking shows significant association with risky sexual behavior. Students who drink alcohol were 3.94 times more likely to practice risky sexual behavior than their counterparts (OR [95% CI] = 3.94[15.40-62.16]). Similarly, students who chew khat were 2.8 times more likely to practice risky sexual behavior than those never chew (OR [95% CI] =2.8[4.59-17.63]) and students those smoke cigarette were 2.2 times more likely to engage into risky sexual behavior than those who never smoke (OR [95% CI] = 2.2 [7.92-66.71]) (Table 2).

Variables		Risky sexual behaviors		AOR(95%CI)
		Yes	No	
Field of Study	Health	57(14.1%)	194(48%)	1
	Non health	70 (17.3%)	83(20.5%)	2.87(1.86-4.3)*
Place of residence	Urban	60(14.9)	162(40.1%)	1
	Rural	67(16.6%)	115(28.4%)	1.57(1.03-2.4)*
Year of study	1st	54(13.4%)	132(32.7%)	1
	2nd	44(10.9%)	92(22.8%)	1.17(0.72-1.8)
	3rd	18(4.5%)	21(5.2%)	2.1(1.0-4.2)
	4th	11(2.7%)	32(7.9%)	0.84(0.39-1.79)
Attending religious service	Every day	70(9.9%)	190(47%)	1
	At least once in a week	44(10.9%)	72(17.8%)	1.67(0.98-2.65)
	At least in a month	6(1.5%)	7(1.7%)	2.34(0.76-7.19)
	At least once in a year	5(1.2%)	4(0.9%)	3.41(0.89 13.07)
	Never	2(0.5%)	3(0.7%)	1.82(0.30-11.12)
Having daily expense	Yes	84(20.8%)	196(48.5%)	1
	No	43(10.6%)	81(20%)	1.24(0.79-1.94)
Marital status	Married	10(24.8%)	7(1.7%)	1
	Single	117(30%)	270(66.8)	0.30(0.113-1.28)
Discussion with family	discussed	63(15.6%)	183(45.3%)	1
	Never discussed	64(15.5%)	94(23.3%)	1.98(1.29-3.03)*
Alcohol drinking	No	10(2.4%)	201(49.7%)	1
	Yes	117(29%)	76(18.8%)	3.94(15.4-62.16)*
Chat chewing	No	88(21.8%)	264(65.3%)	1
	Yes	39(9.7%)	13(3.2%)	2.8(4.59-17.63)*

Cigarette smoking	No	95(23.5%)	273(67.57%)	1
	Yes	32(7.92%)	4(0.99)	2.2(7.92-66.71)*
NB: * statistically significant association at P-value of <0.05.				

Table 2: Associations of socio demographic variables, substance abuse and risky sexual behavior among AMU students, 2014

Discussion

In this study an attempt has been made to assess the prevalence of risky sexual behaviors and factors predisposing to risky sexual behaviors. About 31.4% of the students were engaged in at least one of the risky sexual behaviors which accounts for 77.2% for males and 22.8% for females. This study is much lower when compared with the study conducted in Haramaya University students, where 65.8% of them had at least one of the risky sexual behaviors [13]. The difference between the above studies may be due to difference in usage of substances that initiate risky sexual behaviors like khat chewing and alcohol abuse between the two settings.

The mean age of sexual initiation (16 years) were lower when compared with studies conducted among youths in Dire Dawa town and Addis Ababa University students [15,16]. However, the median age at first sexual debut of this study is almost similar (16.5) with the national survey result of EDHS (2011) which is 16.6 years [17]. The reason may be due to difference in study population and their difference in environmental exposure to factors encouraging risky sexual behaviors. Among the total respondents who ever had sex, 39(10.4%) of them had used condom during their first sexual intercourse while, 89.6% respondents who had sex in the past 12 months had used condom at least once during sexual intercourse and 24.8% of them had consistently use condom. The result was much higher when compared to a study conducted in Gondar collage of medical science, where 6.4% of student used condom consistently. In addition, in this study, male students who had sex with commercial sex worker were 8.8%, which is slightly higher than the study conducted in Gondar College of medical science which was 7.8% [18].

In this study over all prevalence of chat chewing was found to be 12.9% which is lower when compared with study done among Jimma university staffs which was 30.8 % [19]. The prevalence of alcohol use in this study was 47.8%; which is higher than study in Jimma University medical students [20]. The cigarette smoking in this study was 8.9%; which is lower than a study done on Nigerian high school students [21]. This may be due to the difference in the study population, since this study was conducted on university students and the above studies were conducted on other populations like, staffs and high school students. In addition to the above reason, the reason why prevalence of alcohol use was higher in this study compared to Jimma University medical students may be since our study includes both health and non-health departments while, in Jimma University, the study include only medical students who may have an awareness of health problem of alcohol consumption.

In this study, there was an association between place of origin and risky sexual behavior. Students whose residence was rural before they join campus were 1.57 times more at risk of sexual behavior than those who came from urban. This may be due to students who came from rural areas were exposed to new movies that encourage risky sexual behavior that they never come across.

The study revealed that students who had discussed at least one time (ever discussed) about sexual issue with their parents had less likely to have risky sexual behaviors compared to those who were not discussed the issue. This study is supported by study conducted in Haramaya University and Addis Ababa University [13, 16]. The reason may be since respondents whose parents allow them to discuss about sexual issue with them also discusses about risky sexual behaviors and its prevention methods than those who consider discussion of sexual issues as taboo.

In this study, alcohol intake, khat chewing and smoking were significantly associated with risky sexual behavior. These findings were comparable with study conducted in Jimma University, Addis Ababa University, Dire Dawa town and Haramaya University [13,15,16,20]. This might be due to the nature of alcohol in altering rational decision making ability, decreasing inhibitions, and increase risk taking behavior.

Limitations of the Study

Being cross sectional study makes this study difficulty to establish temporal relationship. Due to the fact that this study deals with very sensitive issues such as sexual practice and other risk factors related to it, social desirability bias may be introduced.

Conclusion and Recommendation

In this study about 31.4% of the students were engaged in at least one risky sexual behavior. The use of substances like (khat, cigarette and alcohol), being non health campus field of study and discussion with family about sexual issue were significantly associated with risky sexual behavior among AMU students. Based on the findings of the study, the following recommendations were made.

The university should inform its students about healthy sexual behavior and factors related with risky sexual behaviors including substance abuse and its consequences. Arba Minch University administration should improve accessibility of condom and point of delivery. The gender office should work with all concerned bodies to assist in the development of female sexual decision-making skills and empowerment related to sexual issues to protect female students from sexual harassment.

Authors' contribution

BS wrote the proposal, participated in data collection, analyzed the data, drafted the paper, and revised subsequent drafts of the paper. GK and DA approved the proposal with great revisions and revised subsequent drafts of the paper. All authors read and approved the final manuscript.

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