

Risky sexual behavior and associated factors among preparatory school students in Arsi Negelle Town Oromia, Ethiopia

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ABSTRACT

Risky sexual behavior remains the major public concern commonly affecting youths. These behaviors lead to undesirable health outcomes including sexually transmitted infections, unplanned pregnancy and abortion for female. This study was intended to assess risky sexual behavior and associated factors among preparatory school students in Arsi Negelle Town. Institution-based cross-sectional study was conducted among 300 preparatory school students. Data was collected using a structured and pre-tested questionnaire. Bivariate and multivariable analysis was conducted to identify the association between variables. Statistical significance was declared at $p < 0.05$. The prevalence of risky sexual behavior was, 32. % (95% CI: 24.3, 40.9). It was significantly associated with students grade level (AOR: 5.77; 95% CI: 1.49, 22.28), having no discussion on sexual and reproductive health (AOR: 11.28; 95% CI: 1.8, 77.49), poor knowledge on HIV/AIDS (AOR: 4.86, 95% CI: 1.38, 17.11), not watching porn movies (AOR: 0.01; 95% CI: 0.001, 0.26), having pocket money (AOR: 0.10; 95% CI: 0.03, 0.39) and having peer influence (AOR: 0.07; 95% CI: 0.02, 0.28). Significant number of students engaged in at least one risky sexual behavior. The behavior was commonly seen among students with poor knowledge about HIV, no discussion on sexual and reproductive health, lower grade level, having pocket money, having peer influence and watching pornographic movies.

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1. INTRODUCTION

Risky sexual behavior represents an action that will enhance the likelihood of an individual participating in sexual activity with another person infected with a sexually transmitted infection (STI) will be infected or become pregnant, or make a partner pregnant [1]. According to evidence from published articles, risky sexual behavior comprises: engaging in sex with a commercial sex worker, initiating sexual intercourse at a young age, unprotected intercourse, having more than one sex partner and illicit drug use [2-5]. Risky sexual behaviors put an individual particularly the youth at higher risk for sexually transmitted disease and unintended pregnancy [6-8], psychological distress and abortion [3, 4]. Most of the school-going youths are a vulnerable group of the population that, engage in risky sexual

behavior and encounters inadvertent health outcomes [9]. There is evidence to suggest that youth are more likely to engage in risky sexual behaviors than adults [10]. The chance of contracting STIs whenever school-going sexually active adolescents engaged in unprotected sexual intercourse. The situation in which adolescents become sexually active highly influences how they can manage sexual relationships, the degree to which they can protect themselves and how they notice the undesirable consequences of sex [11]. In Ethiopia youth (15-24 years) represent 20.11% of the general population. This group comprises productive force for the country's economy [12].

Adolescents may become vulnerable to risky sexual behavior because they are prone for peer pressure, poor tie with and limited support from parents, inappropriate parenting roles and role models, and living in unfavourable environments [3, 13, 14]. Mother's occupation, watching pornographic movies and drinking alcohol were some of the factors contributing to risky sexual behavior [15]. This behavior may also happen due to a lack of adequate information and basic skills to deal with their emotions, and high peer pressure to experiment with the sex [16, 17]. In addition, the social norm in which the youth live and grow can intensify the risks even if youth have adequate education [18].

Preparatory schools are institutions where many youths from different high schools joined and attend their grade eleven and grade twelve class. Majority of students enrolled in preparatory schools are adolescents aged from 16-24 years which are the most vulnerable group of the population hence identifying risky sexual behaviors and associated factors among this segment of the population are vital to formulating a strategy for public intervention. Studies so far in Ethiopia mainly emphasized on the risky sexual behavior of the adult population in different segments of the country. Sexual behavior of preparatory school students has been given little attention and not well studied, therefore this study intended to assess risky sexual behavior in this group and the contributing factors.

2. RESEARCH METHOD

A quantitative institution-based cross-sectional study was conducted among preparatory school students in Arsi Negelle Town from Mar-Apr 2016. The town is located in South-eastern Ethiopia about 228 km away from the capital city, Addis Ababa. According to the national census report population of the town was 260,129 of whom 128,885 were men and 131,244 were women [19].

All of Arsi Negelle preparatory school students registered in the academic year of 2016 was our source population and randomly sampled students satisfying the inclusion were our study population. All grade eleven and grade twelve students that present during data collection and registered for the academic year of 2016 were included in the study. Preparatory school is a school where students attend their grade eleven and twelve class.

The sample size was calculated using a single population proportion formula after considering the next assumptions: 95% CI, 5% margin of error, 10% non-response and 26.7% for the best estimate of the proportion of risky sexual behaviour from a study in Addis Ababa [20]. Hence, the final computed sample size (n) was 331. First active list of students was obtained from student's registration book for the academic year and stratified into grade assuming similarity in academic rank among students of the same grade. There were a total of 1120 (690 grade 11 and 430 grade 12) preparatory students in Arsi Negelle Town and they were distributed into 15 sections of which 6 sections (A-F) for grade twelve and 9 sections (A-I) for grade eleven. A number of students in each section range from 65-85. The total calculated sample size was selected from all section by systematic random sampling method after computing k-value for each stratum and considering their identification number as a frame of reference (thus $k=4$) for both strata.

A structured, pretested and self-administered questionnaire was used to collect data. The questionnaire was adapted and developed by reviewing different articles conducted on the issue. Initially, it was prepared in the English language then translated to local language and the response was re-translated to English to check the consistency. The questionnaire had; socio demographic, knowledge about HIV/AIDS, and risky sexual behavior parts. The training was given for two days to data collectors before the actual data collection on the content and approach of the questionnaire. A pretest was done on 5% of the sample and the outcome was used to correct wording, spelling, and approach of the questionnaire.

Students have risky sexual behaviour when they report at least one of the following characteristics: having multiple sexual partners, having sex with a commercial sex worker, age less than 18 years at first sexual debut, and inconsistent use of a condom. Knowledge about HIV refers to student's level of comprehension about the human immune deficiency virus. It was assessed by asking students about, ways of transmission, prevention and whether it is curable or not. Every correct answer was given a score of 1 and a wrong or incorrect response was given a score of 0. Those students who respond more than the mean value have good knowledge while those who respond less than the mean value have poor knowledge.

The collected data were coded, cleaned and double entered using Epidata version 3.1 software and analyzed using SPSS version 20. Descriptive statistics like frequency, percentages, and proportion were used to summarize pertinent variables and presented using tables and graphs. Bivariable and multivariable analysis were done to test the relationship between the independent and dependent variable. Variables with p-value <0.25 were entered into the multivariable analysis. In multivariable analysis, variables with p-value <0.05 have a statistically significant association. Model fitness was checked by Hosmer and Lemeshow goodness of fit test with the enter method. This study was approved by the institutional review board of Addis Ababa University. Informed consent was taken from each respondent before the interview and the collected data was kept confidential through anonymous response.

3. RESULTS AND DISCUSSION

A total of 300 preparatory school students have filled the questionnaire. They are giving a response rate of 91%. Respondent's mean age was $18.5 \pm SD1.4$ and ranged from 16-24. Nearly 60% of all respondents were male. Greater numbers of mothers (81.3%) and fathers (90.7%) of respondents have formal education. Table 1 describes that majority of respondents (67%) were Oromo in ethnicity and 48 % (144) were followers of Orthodox religion.

Table 1. Socio demographic characteristics of respondent

Characteristics	Categories	Frequency (n)	Percent (%)
Age	15-19	240	80.0
	20-24	60	20.0
Sex	Male	179	59.7
	female	121	40.3
Grade	11	184	61.3
	12	116	36.3
Religion	Orthodox	144	48.0
	Muslim	73	24.3
	Other*	83	27.7
Ethnicity	Oromo	201	67.0
	Amhara	65	21.7
	Other [†]	34	11.3
With whom do you live	with family	251	83.7
	Alone	15	5.0
	with other	34	11.3
Pocket money	No	236	78.7
	Yes	64	21.3
Mothers educational status	no formal education	56	18.7
	formal education	244	81.3
Fathers educational status	no formal education	28	9.3
	formal education	272	90.7

From the total of 300 respondents involved in the study, 115 (38.3%) had sexual intercourse in the last 12-months prior to the survey. The mean age of sexual debut was $17.6 \pm SD1.4$. Of those who started sexual intercourse, 29 (25.2%) ever used a condom, whereas 86 (74.8%) uses a condom, from this 35 uses always, 25 usually and 26 sometimes. Nearly, three fifths (57.4%) of respondents mentioned sexual desire as an underlying cause for engaging in sexual activities. Forty-five percent of respondents reported that their initial sexual engagement was with their boy/girlfriend. Of those who undertook sexual intercourse 81.4% and 51.2% have, early initiation of sexual debut (<18 year) and more than one sexual partner 12-month prior to the survey respectively. Two (2.3%) of respondents have sex with a commercial sex worker. Overall 32.5% (95% CI: 24.3, 40.9) have at least one risky sexual behaviour as shown in Table 2.

Virtually all (99.7%) of the respondents know that HIV/AIDS can be transmitted from person to person in different ways. Of these, sharing needle was mentioned by all respondents as the primary mode of transmission of HIV. Almost all (99.7%) of the respondents know that HIV can be prevented. From these using condom was mentioned by the majority 258 (86.3%) of respondents as presented in Table 3.

On multivariable analysis, students grade level (AOR: 5.77; 95% CI: 1.49, 22.28), absence of discussion on sexual and reproductive issues (AOR:11.28;95% CI:1.8, 77.49), knowledge of students on HIV/AIDS (AOR: 4.86, 95% CI: 1.38, 17.11), watching porn movies (AOR: 0.01; 95% CI: 0.001, 0.26), having pocket money (AOR:0.10; 95% CI:0.03, 0.39) and having peer influence (AOR: 0.07; 95% CI: 0.02, 0.28) were some of factors associated with risky sexual behaviour (RSB). Hence, grade eleven students were 5.8 times more likely to engage in risky sexual behaviour than grade

twelve students. Those students who have no discussion about SRH in the family were 11.3 times more likely to have at least one RSB. Students who have no peer influence had 93% lower odds of having RSB as compared to those who have peer-influence and students who don't watch porn movies had 99% lower odds risky sexual behaviour as compared to their counterpart Table 4.

Table 2. Sexual history among respondent

Variables	Category	Frequency (%)
Sexual intercourse within the last 12 month	No	185 (61.7)
	Yes	115 (38.3)
Age at sexual initiation	<18	91 (79.1)
	≥18	24 (20.9)
Mean age at first sexual debut		17.6±SD1.4
Condom use	No	29 (25.2)
	Yes	86 (74.8)
How often do use a condom (n=86)	Always	35 (40.7)
	Usually	25 (29.1)
	Sometimes	26 (30.2)
Reason for sexual intercourse (n=115)	personal desire	66 (57.4)
	Peer influence	30 (26.1)
	Alcohol consumption	7 (6.1)
	Watching poor movies	11 (9.6)
	Bullying	1 (0.9)
With whom do you have sex initially	With boy/girlfriend	53 (46.1)
	With classmate	42 (36.5)
	Neighbour	13 (11.3)
	Teacher	5 (4.3)
	CSW	2 (1.7)
The number of sexual partner in the last 12-month	One	60 (52.2)
	More than one	55 (47.8)

Table 3. Knowledge about HIV/AIDS among respondent

Variable	Categories	Frequency (n)	Percentage (%)
Is HIV transmittable (n=300)	No	1	0.3
	Yes	299	99.7
Mode of transmission (299)			
Transfusion of unscreened blood	No	158	52.8
	Yes	141	47.2
Sexual intercourse	No	28	9.4
	Yes	271	90.6
Sharing needle	No	0	0.0
	yes	299	100
Sharing clothes	No	276	92.3
	yes	23	7.7
Through mosquito bite	No	274	91.6
	Yes	25	8.4
Mother to child	No	123	41.1
	Yes	176	58.9
Is HIV preventable (n=300)	No	1	0.3
	Yes	299	99.7
Ways of prevention (n=299)			
Not eating with HIV patients	No	292	2.3
	Yes	7	97.7
not receiving unscreened blood	No	88	29.4
	yes	211	70.6
Abstinence	No	55	18.4
	yes	244	81.6
Using condom	No	41	13.7
	Yes	258	86.3
HIV is not curable	No	21	7.0
	Yes	279	93.0
Knowledge	Poor	160	53.3
	Good	140	46.7
Ways of prevention (n=299)			
Not eating with HIV patients	No	292	2.3
	Yes	7	97.7
not receiving unscreened blood	No	88	29.4
	yes	211	70.6
Abstinence	No	55	18.4
	yes	244	81.6
Using condom	No	41	13.7
	Yes	258	86.3

Table 4. Bivariable and multivariable analysis of factors associated with risky sexual behaviour

Characteristics	Risky sexual behavior		COR (95%CI)	AOR (95%CI)
	No	Yes		
Grade				
Grade 11	39 (60.0)	26 (40.0)	2.36 (1.03, 5.44)*	5.77 (1.49,22.28)*
Grade 12	39 (78.0)	11 (22.0)	1	1
Given pocket money				
No	59 (79.7)	15 (20.3)	0.22 (0.09,0.51)*	0.10 (0.03,0.39)*
Yes	19 (46.3)	22 (53.7)	1	1
Mothers level of education				
No formal education	14 (42.4)	19 (57.6)	4.83 (2.03,11.47)*	
Formal education	64 (78.0)	18 (22.0)		
Discussion about SRH				
No	5 (29.4)	12 (70.6)	7.01 (2.25,21.86)	11.82 (1.80,77.49)*
Yes	73 (74.5)	25 (25.5)	1	
Knowledge of HIV/AIDS				
Poor	38 (61.3)	24 (38.7)	1.94 (0.87,4.36)**	4.86 (1.38,17.11)*
Good	40 (75.5)	13 (24.5)	1	
Watching porn movies				
No	70 (72.0)	30 (28.0)	0.06 (0.01,0.47)*	0.01 (0.001,0.26)*
Yes	1 (12.5)	7 (87.5)	1	
Peer pressure				
No	65 (77.4)	19 (22.6)	0.21 (0.09, 0.51)*	0.07 (0.02,0.28)*
Yes	13 (41.9)	18 (58.1)	1	
Alcohol consumption				
No	76 (70.4)	32 (29.6)	0.17 (0.03, 0.91)*	
Yes	2 (28.6)	5 (32.2)	1	

** P-value < 0.25, * P-value < 0.05 SRH: sexual and reproductive health

The current study showed that nearly one-third of students (32.5%; 95%CI: 24.3, 40.9) have risky sexual behaviour. This finding was lower as compared to finding from Uganda [21], Ethiopia [22, 23], and Iranian [24]. The incongruity amidst these studies may be attributed to the difference in the study area, respondent's category and period. There is also published articles that reported the lesser prevalence of risky sexual behaviour than the finding in the current study including some studies from Ethiopia [25-28]. The variation may result from the difference in sample size, respondent's educational status, and socioeconomic and cultural divergence among the study area.

A nearly similar result in the prevalence of risky sexual behavior was reported in some of the studies in Ethiopia [29, 30] and Colombia [31]. Which may be the result of similarity in respondent's category and age group. Our finding revealed that 55 (47.8%) of sexually active respondents had more than one sexual partner twelve-month prior to the survey. This is lower than other findings from Ethiopia, [32, 33]. The difference may result from dissimilarity in respondents category the later includes students of grade 9 and 10 whereas the former study involves only grade 11 and 12.

The current study's finding showed that 2 (1.7%) of respondents had sex with commercial sex workers which are quite lower than the result in another study in Ethiopia [32]. The inconsistency may be accredited to the difference in respondent's category and size. The mean age of respondents during sexual initiation in the present study was 17.6±1.4. This is a bit higher than findings from other studies in Ethiopia [28, 32] and India [34]. The dissimilarity may be enlightened by a difference in socioeconomic status and age of respondents among studies.

In the current study respondent's knowledge about HIV/AIDS, was significantly associated with risky sexual behaviour. Hence, students who have good knowledge of HIV/AIDS were less likely to have risky sexual behaviour. A similar finding was reported in another study in Ethiopia [15, 26]. Our finding revealed that respondents who never seen pornographic movies were less likely to engage in risky sexual behaviour than their counterparts. This finding is parallel with studies in Saudi Arabia [35] and in other parts of Ethiopia [27, 32].

The present study showed that respondents who have a parental discussion about a reproductive and sexual issue have lower chances to participate in risky sexual behaviour than their counterparts. This finding was supported by other studies in South Africa [36] and Ethiopia [32, 37]. This is due to the positive effect of an open parent-child discussion in making respondents aware of sexual and reproductive matters prior to engagement. The current study showed that respondents who don't encounter peer influence have a lower likelihood of involvement in risky sexual behaviour. The finding is consistent with other studies in Ethiopia [37, 38]. Limitation of the study Cross-sectional nature of the study was one of the limitations that cause trouble in establishing a temporal relationship between the independent and outcome variable. It is obvious that issues related to sexual and reproductive health are very sensitive and subject to social desirability bias.

4. CONCLUSION

It is noted that a remarkable number of students have at least one risky sexual behavior. Risky sexual behavior thrives among students, who were grade eleven, given pocket money, have mothers with no formal education, poor knowledge on HIV/AIDS, no discussion about sexual and reproductive health, watching porn movies and those who took alcohol. The finding of this study emphasizes the need to strengthen sexual and reproductive health as a component of school health program and awareness creation on HIV/AIDS and substance use through different school clubs. Parents must have good knowledge of their adolescent's developmental needs and encourage an open discussion within the family about sexual and reproductive health. Lastly, more studies should be conducted in a similar setting by considering all youths in the study area, to explore the relationship between socioeconomic and attitudinal factors and consistent use of a condom.

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