

Family environment and sexual behaviours in Jimma zone, south west Ethiopia

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Abstract: *Back ground:* Youths have limited access to reproductive health services that focus on the special needs of adolescents and these youths are at high risk for risky sexual behaviors. Because of the complex nature of the problem, youth reproductive health strategies demand a multi-sector and integrated approach on risky sexual behavior. This paper examines how lack of parental monitoring and other factors affect youth's sexual behavior. *Objective:* to assess family environment and associated factors on risky sexual behaviors among high school youths in Jimma zone, south west Ethiopia. *Methods:* A cross sectional study design was used in 5 randomly selected preparatory schools of Jimma zone. A total of 287 students were selected using simple random sampling technique based on proportional to the size of the number of students in each preparatory school. A structured, pretested and self administered questionnaire was used to collect data. Multiple logistic regressions were performed to identify the independent predictor of risk sexual behavior. *Results:* From sexually active students 81 (28.2%) students had sexual risk behavior and only 5[6.0%] students reported they used condom always. Sixty four [82.1] reported that they were willing the first time they had sex. 225[78.4%] of students were under high pressure from their peers. Students who had girl/boy friend were 5 times more likely to be at risk. Among students higher likelihood of risky sexual behavior significantly associated with higher levels of alcohol consumption, exposure to pornographic film and having girl/boy friend. But higher family connectedness associated with lower level of likelihood of risky sexual behavior. *Conclusion and Recommendation:* Alcohol consumption, watching pornographic movies and having girl/boy friend were the major predictors of risky sexual behaviors but from family environment family connection was a predictor variable as preventive factor for risky sexual behaviors. Therefore, interventions that emphasize different domains of the risk and preventive factors in an integrated manner may be the most effective strategies.

Keywords: Sexual Behavior, Family Environment, High School

1. Introduction

The health of adolescents is greatly dogged by their behavior, and sexuality is an important and complex area of adolescent behavioral health. Given the severity of negative consequences associated with sexual activity, ensuring that youth receive sexuality education is important for healthy development [1]. Youth live in multiple social centers that shape their attitudes and behaviors including changes at the community, family, schools and peers levels. All of these environments are interconnected in shaping how young people act and interact; and each can be a source of risk or protection to young people [2].

Young people have limited access to reproductive health services that focus on the special needs of adolescents and

these youths are at high risk for risky sexual behaviors and reproductive health problems [3]. Risky sexual behavior is any behavior that increases the probability of negative consequences associated with sexual contact, including HIV/AIDS or other sexually transmitted diseases (STDs), abortion and unplanned pregnancy. Risk factors are characteristics of individuals, families, schools and communities that make people more vulnerable to adverse consequences [4].

The family and school are the contexts for social interaction, cultivation of interpersonal skills, formation of peer groups, self-expression, and development of self. Several studies have demonstrated that the social context of

the school and family has important implications for determining the likelihood that an adolescent will follow a prosocial path through adolescence as opposed to becoming involved in delinquent behavior [5-9].

Worldwide the size of the population between 15 to 24 ages is currently 1.2 billion and is expected to continue growing for at least 20 more years [10]. Globally about 100 million new STI cases occur each year, about half in persons aged 15 to 24 and about 88% of all new cases in adolescents and young adults and HIV is the sixth leading cause of death among this age group [11]. In 2006 in Ethiopia almost 50% of youths in high school reported having sex, there were about 750,000 pregnancies among youths of age 15-19, and 67% of pregnancies were unplanned [12]. The Longitudinal Family Survey of Youth in Jimma indicated that alcohol consumption and drug use for adolescents are associated with increases in early sexual activities, sex with commercial sex workers and unprotected sex [13, 14].

In general in-school youths are highly affected by many sexual and nonsexual consequences, including HIV/AIDS or STI, unwanted pregnancy, abortion, poor school performance, high school dropout rate, psycho-social problems, conduct disorder, divorce, and economic problems [15]. Studies found the influence of the family when dealing with a young person's behavior and careful consideration of environmental and interpersonal factors. Family social characteristics have been found to influence the behavior of children and their achievements throughout their life course [16].

In developing countries little research to date has explored the effects of normative changes in living arrangements on risk sexual behavior in emerging adulthood. Family environment during school life, however, could be robust predictor of adolescent sexual risk behavior. On the other hand most of youths are in-schools and due to emerging high number of high school students and less distribution of preparatory schools in Ethiopia, it has become necessary for some students to live separately from their parents for the duration of their training which may lead to changes in their living arrangements. Therefore this study aims to assess the influence of family environment on students living away from parents on sexual risk behaviors.

2. Methods and Materials

2.1. Study Area and Period

A cross sectional study design was used and conducted in Jimma zone from February 14-30 /2013. Jimma town is the capital town of Jimma zone and it is located 356 Km away from Addis Ababa in South West Ethiopia, Oromia National Regional State. Jimma zone has about 2.8 million populations according to CSA 2007. In 2012/13 there were 9 preparatory schools in this zone. These schools are providing educational services for 3065 students [male-1879 and females-1186]. During this study period there were 11 preparatory schools in Jimma zone [17].

2.2. Study Population

Students who were not under regular family monitoring and whose age between 15 -24 in five preparatory schools in Jimma zone.

2.3. Sample Size Determination

The sample size was determined using single population proportion formula with the following assumption; $P = 14\%$ and margin of error 5%. The results of the study on "Assessment of sexual risk behaviors of in-school youth in West Gojjam zone, Amhara regional state, Ethiopia indicated proportion of in-school adolescents living away from their parents who are sexually active was 14% [10]. The final sample size after finite population correction formula and with 10% non response rate was 288 in-school youths.

2.4. Sampling Technique

simple random sampling technique had been employed. All [Nine] preparatory schools in Jimma zone were identified and listed. Then five preparatory schools were selected from nine preparatory schools using simple random sampling. Then students from five schools were selected based on their living arrangements and based on the proportion of the number of students from each school which were identified prior to main data collection time. Then simple random sampling technique was employed to select the participants from each selected schools using lottery methods.

2.5. Measurements

A pretested and structured questioner adapted from various sexual risk behavior studies was used to collect data. The questionnaire was originally developed in English and then translated into two local languages [Afan Oromo and Amharic], and it had been then back translated to English to facilitate reliable responses and to keep the original meaning of the instrument. The instrument includes (Socio-demographic characteristics; Individual factors assessed by (yes/no and multiple choices), Family environment[(family connectedness, parental monitoring, parental communication and family support) were assessed by 22 Items with 5-point Likert scale], School attachment[(teacher-students relationship and school-students relationship) (8 items with 4-point Likert scale), Peer pressure (5 items with 3-point Likert scale)], Community factors [(Norms of the community) (6 items with 5-point Likert scale)] and Risky sexual behavior[(inconsistence condom use and multiple sexual partners (3 items with yes/no)]. (10, 14, 15, 16, 17, 18, 19). The content validity of the questionnaire was assured by experts. The internal consistency of the items with Likert scales were checked through Cronbach's alpha. The Cronbach's alpha value for each items was greater than 0.7.

Family Environment: includes family connectedness, parental monitoring, parental communication and family support.

Risky sexual Behavior: Three items asked whether the participants had engaged in sexual inter-course during the past 6 months, the number of sex partners during the past 6 months, and if the participants used a condom in their every instance of sexual inter-course.

2.6. Data Collectors

The data were collected for 15 days with seven trained data collectors with a minimum of diploma holders. Five MPH students had participated during supervision.

2.7. Data Quality Management and Assurance

The questionnaire was used and translated to two local languages [Afan Oromo and Amharic] and back translated to English by other translator. Pre-testing of the questionnaire was undertaken in 5 percent of the sample size in similar areas before the actual data collection took place. A total of three days' intensive training was given for all supervisors and data collectors. Overall activity was controlled by the supervisors and principal investigator carefully during data collection.

2.8. Data Processing and Analysis

Data were checked for completeness and consistency each day after data collection. Data entry and analyses were performed using SPSS version 16 for Windows. First, descriptive analysis was carried out to explore the socio-demographic characteristics of the respondents. Logistic regression analysis was performed to identify the independent predictors of risky sexual behavior at p -value <0.05 .

2.9. Ethical Considerations

The study protocol was approved by Ethical Clearance Committee of Jimma University, College of Public Health and Medical Sciences. Permission letter was obtained from Jimma zone educational office. An official letter of co-operation was written to respective schools. Information on the study was given to the participants, including purpose and procedures, potential risk and benefits in order to encourage provision of accurate and honest responses. Potential participants were told that participation is voluntary and that confidential and private information was protected. For ethical purpose, written informed consent was obtained from each participant. In order to protect confidentiality, names or school IDs were not included on the written questionnaires. Identification of an informant is only possible through numerical codes.

3. Results

3.1. Socio-Demographic Characteristics

A total of 287 students participated in this study producing a response rate of 99.6%. Regarding sex 156 (54.4%) were males and the mean age of the students was

18.6 (SD \pm 1.6) with a minimum of 15 years and maximum 24 years. Regarding the residence and religion of respondents 268(93.4%) of them were rural students and, 136(47.4%) were Muslim in religion. Regarding educational status, 111(38.7%) mothers and 92(32.1%) of fathers of students were illiterate (table-1).

Table 1. Distribution of Socio-Demographic Characteristics of Students in Jimma Zone Preparatory School, February, 2012.

Variables	Frequency N=287 N[%]
Sex: Male	156[54.4]
Female	131[45.6]
Grade level: 11 th grade	67[23.3]
12 th grade	220[76.7]
Age: 15-19	216 (75.3)
20-24	71 (24.7)
Residence: Rural	268[93.4]
Urban	19[6.6]
Religion: Islam	136[47.4]
Orthodox	101[35.2]
Protestant	50[17.4]
Educational status of mother	
Illiterate	111[38.7]
Elementary	108[37.6]
Secondary	34[11.8]
Above	34[11.8]
Educational status of father	
Illiterate	92[32.1]
Elementary	99[34.5]
Secondary	55[19.2]
Above	41[14.3]

3.2. Individual Factors and Risky Sexual Behaviors

Respondents were asked if they had ever had sexual intercourse with an individual of the opposite sex, and 85(29.6%) said they had. From sexually active students 81 (28.2%) students had sexual risk behavior. Regarding religious visit 93[32.4%] of students had visited religious institutions. Out of 287 students 157[54.7%] have had girl/ boyfriends.

Sixty eight [23.7%] of students were consumed alcohol and 96 [33.4%] of students were watched pornographic movies in the last 6 months. Eleven 11[12.9] students reported they had two or more sexual partners in their lifetime. Regarding contraceptives used, only 5[6.0%] students reported they used condom always. From sexually active students, 64[82.1] reported that they were willing the first time they had sex (table 2).

3.3. Family Monitoring

Family connectedness and family support scores were analyzed as a continuous variable and for family connectedness possible values ranging from 10 to 50. The mean score of family connectedness was 40.29(\pm 10.67). The mean score of family support was 28.95(\pm 5.78).

Table 2. Frequency distribution of students by individual factors in Jimma zone preparatory school, February, 2012.

Variables	Frequency N=287 N ₀ [%]
Have had sex	
Yes	85[29.6]
No	202[70.4]
Had boy/girl friend	
Yes	157[54.7]
No	130[45.3]
Age of first sex	
<18	26[30.6]
18-24	59(69.4)
Religious visit	
Yes	93[32.4]
No	194[67.6]
Frequency of Religious visit	
Daily	62(21.6)
Most of the time	132(46.0)
Once per week	36(12.5)
Once per month	46(16.0)
Never visit	11(3.8)
Alcohol Consumption	
Yes	68[23.7]
No	219[76.3]
Watch pornographic film	
Yes	96[33.4]
No	191[66.6]
Chewing chat	
Yes	115(40.1)
No	172(59.9)
Sniffed glue	
Yes	68(23.7)
No	219(76.3)
Substances used at first sex	
Yes	9[10.6]
No	76[89.4]
Contraceptive used at first sex	
Yes	29[34.1]
No	56[65.9]
Contraceptive used at last sex	
Yes	38[44.7]
No	47[55.3]
Number of sexual partners with in last 6 months	
None	46[54.1]
One	28[32.9]
Two or more	11[12.9]
Frequency of condom use	
Some times	48[57.1]
Most of the time	31[36.9]
Always	5[6.0]
Having sex with Commercial sex workers	
Yes	3[1.0]
No	284[99.0]
Decision to have first sex	
Fall in love	10[12.8]
Willingly	64[82.1]
Forced	4[5.1]

3.4. Communication Regarding Sexuality and HIV/AIDS

Two hundred nine [88.7%] of students were discussed about sexuality or HIV/AIDS and reproductive health. Family members and friends were the dominant sources of information regarding sexuality and HIV/AIDS.

3.5. School Attachment

School attachment scores were analyzed as a continuous variable with possible values ranging from 10 to 21. The mean score for school attachment of students was 17.3(± 2.37).

3.6. Peer Influence

When we see the peer influence, 225[78.4%] of students were under high pressure from their peers.

3.7. Community Factors

Community factors scores were analyzed as a continuous variable with possible values ranging from 6 to 30. The mean score for community factors of students was 22.5(± 5.52).

3.8. Predictors of Risky Sexual Behavior

The result showed that risky sexual behavior by controlling the effect of all other relevant factors, the likelihood of being at risk among students who consumed alcohol were 3 times higher as compared to those who didn't consume alcohol [OR 95% CI 3.0(1.26-7.157)] and the likelihood of being at risk among students who had girl/boy friend were 5 times more likely to be at risk than those students who didn't have girl/ boyfriends and the observed difference was statistically significant [OR 95% CI, 5.50(2.433-12.4)].

The result showed that, the likelihood of being at risk who were watch pornographic film was 4 times higher as compared to those who didn't watch [OR 95% CI, 4.10(2.38-7.06)] and for family connection per a unit increase in total score of family connectedness the odds of becoming at risk reduced by 0.94 and the observed difference was statistically significant [OR, 95% CI .94(.907-.98)].

This finding indicated that family connectedness and having girl/boyfriend were the highest independent predictor variables of risky sexual behaviors as compared to other predictor variables. So, having boy/girlfriend, alcohol consumption and watching pornographic film were the independent predictors of risky sexual behaviors but family connectedness was identified as preventive factor for risky sexual behaviors (Table 3).

Table 3. Multivariate Analysis of Risky Sexual behaviors among preparatory school students, Jimma zone February, 2012.

Variable	RISKY SEXUAL BEHAVIOR		COR(95% CI)	AOR(95% CI)
	AT RISK N=81 No (%)	NOT AT RISK N=206 No (%)		
Sex				
Male	52[33.3]	104[66.7]	1.8(1.04-2.98)*	1.14(.46-2.85)
Female	29[22.1]	102[77.9]	1.00	1.00
Religion				
Orthodox	22(27.2)	79(38.3)	1.00	1.00
Muslim	49(60.5)	87(42.2)	2.02(1.12-3.6)*	2.1(.78-5.8)
Protestant	10(12.3)	40(19.4)	.898(.41-2.07)	.86(.29-2.55)
Had boy/girl friend				
Yes	69[85.2]	88[42.7]	7.7(3.94-15.1)*	5.5(2.4-12.4)*
No	12[14.8]	118[57.3]	1.00	1.00
Alcohol Consume				
Yes	27[33.3]	41[19.9]	2.0(1.13-3.57)*	3.0(1.2-7.15)*
No	54[66.7]	165[80.1]	1.00	1.00
Watch pornographic film				
Yes	46[56.8]	50[24.3]	4.1(2.38-7.0)*	2.2(1.1-4.76)*
No	35[43.2]	156[75.7]	1.00	1.00
Chewing chat				
Yes	51(63.0)	64(31.1)	2.7(2.2-6.46)*	2.58(.586-6.8)
No	30(37.0)	142(68.9)	1.00	1.00
Sniffed glue				
Yes	27(33.3)	41(19.9)	2.1(1.13-3.57)*	2.1(.78-5.8)
No	54(66.7)	165(80.1)	1.00	1.00
Family connectedness **			.92(.895-.94)*	.94(.90-.98)*
Family support **			.86(.82-.91)*	.97(.89-1.06)

* P-value <0.05, **= continuous variables

4. Discussion

The findings of this study evidence that about one third of students 29.6% have had sexual intercourse from which 28.2% of them were at risky sexual behavior. This sexual initiation is almost consistent with current data from USA showed that 34% had had sexual intercourse during the previous 3 months of data collection period. Youth Risk Behavior Survey in Ethiopia in 2007 indicated that almost 65% of youths in high school reported having sex [25]. This inconsistency may be due to the sample size and geographical variation in which this study was only on one specific zone and students living away from parents while that of Ethiopian data were from national survey result.

Alcohol consumption was significant predictors of risky sexual behavior and it showed that alcohol users are 3 times more likely at sexual risk than non users. Others also indicated that alcohol users are almost two times more likely to have non-regular sex partner than non-users [26, 27]. Expectancy models stated that an individual's behavior after drinking is driven by preexisting beliefs about alcohol's effects on behavior, in the manner of a self-fulfilling prophecy (Lang, 1985). Thus individuals who believe that alcohol promotes sexual behavior should be more likely to engage in risky behaviors when they drink than those who do not hold these beliefs. Expectancy formulations thus indicate that the strength and nature of individually held beliefs about alcohol's effects should moderate the acute effects of alcohol on sexual risk taking. In short, this theory hypothesized to moderate the effects of alcohol on risky behaviors [4].

The most frequently cited explanation for the link between alcohol and risky sexual behavior is sensation-seeking behavior, which is defined as a disposition characterized by the tendency to pursue novel, exciting, and optimal levels of stimulation [28]. Although these students were not living with their parent's, sexually active students had a significantly lower level of perceived family connectedness than those not sexually active. There was no statistically significant difference in family support, family monitoring and communication about sexuality with family.

Parents are a powerful influence in the lives of their children. When parents make a habit of knowing about their children—what they are doing, who they are with, and where they are and setting clear expectations for behavior with regular check-ins to be sure these expectations are being met they can reduce their children's risks for injury, pregnancy, and drug, alcohol, and cigarette use[29]. Several studies have found that positive relationships or connectedness between parents and adolescents are linked to avoidance or lower use of alcohol, tobacco, and drugs and less likely to initiate sex or be sexually active. On the contrary, poor-quality parent-youths relationships were associated with increased sexual activity [6, 7, and 8].

Youths themselves revealed that parents are the ones who have the most influence on their children's decisions about sex. Indeed, two-thirds of all youths share their parents' values on sexual decision [29].

Regarding pornographic film, watching pornographic film was significantly associated with risky sexual behaviors. It showed that the likelihood of being at risk who was watching

pornographic film were 2 times higher as compared to those who didn't watch. Study in sub-Saharan Africa similarly signified that students who are exposed to pornographic movies are 5 times more likely to have sex with a non-regular partner compared with those who do not watch any pornographic film [7, 8].

More over students who have had opposite sex friends significantly associated with risky sexual behavior among students living away from parents. This finding disclosed students who had girl/boy friend were more likely to be at risk than those students who didn't have girl/boyfriends and statistically significant. Congruent to these findings, Social scientists revealed that parental disapproval of youth sex independently cause youths to delay sexual activity [29]. Contrary to this idea this finding showed that those who have low family relations were more likely to thrive to have opposite sex friends and exposed to early sexual initiation and again vulnerable to early pregnancy, abortion and other risky sexual consequences.

Significant number (88.7%) of students reported that they had ever discussed sexuality or HIV/AIDS. We have tried to investigate parent-youths communication as another dimension in family relationship and found not to be significantly associated with sexual activity. This is also consistent with previous studies [30, 31] and unlike to other studies which showed significant association with sexual activity [32, 33]. Here, the relationship may vary by the content and degree of discussion as well as other factors. Unlike other many studies peer influence was not found to be significantly associated with sexual risk behavior.

5. Conclusion

The findings indicated that a number of preparatory school students in general are sexually active. Understanding the sexual experience of adolescents about the risks associated with sexual activities must be the fundamental element of interventions that are working in the area of risky sexual behaviors. Alcohol consumption was related with sexual risk behaviors. Because of limited drinking and sexual experience of most students prior to preparatory school, and the unprecedented freedoms to experiment that school environments typically provide, students more than most other groups—may combine drinking and sex in ways that jeopardize their mental and physical well-being.

Family environment mostly family support and positive relationships between parents and adolescents are linked to prevent deviant peers and minimize risky sexual behaviors and also association with avoidance or lower use of alcohol, tobacco, and drugs and less likely to initiate sex or be sexually active.

Interventions that emphasize different domains of the risk factors [alcohol consumption, watching porn, having girl/boyfriends] and protective factors [family connection,] in an integrated manner may be the most effective strategies.

Consequently, programs and policies focused on reducing youth's sexual activity and the negative results should encourage parents' presence and involvement in the lives of their children.

Positive parent-youths connectedness should be the primary focus for interventions targeting preparatory school students. Particular attention on the consequence of alcohol consumption, watching pornographic films and early sexual initiation should be given. Because of exposure to such behaviors in early, as it were, have been exposed to adult issues at a vulnerable age can be risky. Future research is needed to determine how family interventions can be integrated and sustained within family and school settings to reduce in-school adolescents' risk sexual behaviors.

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