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Three Fourth of Adolescent in Arjo Gudetu Town had Multiple Sexual Partner as a Risky Sexual Behavior: Eastern Wollega Zone, West Ethiopia: a Community Based Cross-Sectional Study

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Abstract

Background: Risky sexual behavior is the description of the activity that will increase the probability that a person engaging in sexual activity with another person infected with a sexually transmitted infection.

Objectives: This study aimed to assess risky sexual behaviors and associated factor among adolescents in Arjo Gudetu town, western Ethiopia.

Methods: A community based cross-sectional study design was conducted from August 1-30/2019. A multi-stage sampling method was used to select study subjects. Data were cleaned and entered in to SPSS version 25 for analysis. Then descriptive statistics: mean, median and bivariate logistic regression was used to select candidate variable for final model. Factors associated with risky sexual behavior were identified using multivariate logistic regression.

Result: The risk sexual behavior in this study area was about 25.7%. About three fourth of adolescents had multiple sexual partner in the past 12 months. Adolescents attained only primary school were more likely to practice risky sexual behavior compared to those attained secondary school and above 2.036[AOR=2.036 (95% CI: 1.096-3.784)]. Being male was positively associated with risky sexual practice compared to their female counterparts [AOR=1.517(1.308-1.867)].

Conclusion: Risky sexual practice among adolescent was high in this study area. Level of education and being male were factors identified to affect risky sexual practice among adolescent. Therefore, family, community, religious leaders should closely advice the adolescents and Information education communication should be promoted by health professionals; media coverage should be given to prevent risky sexual practices in advance. Further research need to be conducted to explore more about risky sexual behavior and associated factors in rural areas.

Keywords: Risky sexual behavior; Adolescence; Adolescent and multiple sexual partners

Introduction

Adolescence is defined as the period between 10 and 19 years of age [1]. It is a continuum of physical, cognitive, behavioral and psychosocial change that is characterized by increasing levels of individual autonomy, a growing sense of identity and self-esteem and progressive independence from adults. Experimentation and risk-taking are normal during adolescence and are part of the process of developing decision-making skills; adolescents are both positively and negatively influenced by their peers, whom they respect and admire [2]. Risky sexual behavior (RSB) is the description of the activity that will increase the probability that a person engaging in sexual activity with another person infected with a sexually transmitted infection will be infected or become pregnant, or make a partner pregnant [3].

Risky sexual behaviors (RSB) are becoming an important problem all over the world [4]. Young people are perceived as generally healthy, and are not in need of special health services [5]. WHO (World Health Organization) technical brief of 2015 shows young people constitute a significant proportion of those engaged in selling sex or suffering sexual exploitation [6]. Many young people engage in risky sexual behavior and experiences that can result in unintended health outcomes. Recent survey in sub-Saharan Africa has detected decreases in condom use and/or an increase in the number of sexual partners. About 40% and 51% among 15 to 19 year olds and 20 to 24 year olds youths use condom during most recent higher-risk sexual encounter, respectively [7]. Risky sexual behavior is associated with different sexual health problems for instance increase the risk of HIV/AIDS, unintended pregnancy, unsafe abortion and psychosocial problems [8]. WHO estimation report in 2014 shows HIV was second leading cause of death among adolescents [9]. At a time when AIDS-related deaths were declining rapidly in other age groups but AIDS-related deaths among older adolescents aged 15–19 were not declining. UNAIDS (United Nations Programme on HIV/AIDS) estimate shows that there were 250,000 new HIV infections among adolescents in 2015. Of which, 65% occurred among adolescent girls [10]. In 2017, about 1.8 million adolescents between the ages of 10 and 19 were living with HIV worldwide [11]. Sub-Saharan Africa and South Asia regions had highest share of HIV-positive adolescents where about 1.5 million (85%) live in Sub-Saharan Africa [11].

Even though there have been many studies in the area of risky sexual behavior of adolescent in Ethiopia, most of studies focus on adolescent in different institution such as schools rather than in the community.

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Methods

Study area and period

The study was conducted from August 1-30/2019 in Arjo Gudetu town, East Wollega, west Ethiopia. Arjo Gudetu Town is located to the east of Nekemte (Zonal town of East Wollega) at the distance of 42km. According to Diga Health office, the town has total population of 32,156 and 6,433 adolescents. Arjo town has five primary schools, one high school, one Health center, one Adolescent and Youth Friendly Service (AYFS), three private clinics and drug store.

Study design and population

A community based cross-sectional quantitative study design was conducted to assess risky sexual behaviors among adolescents in Arjo Gudetu town.

All adolescents residing in Arjo Gudetu were source population where as randomly selected adolescents and available during data collection were study population. Adolescents residing in the study area at least for the last six months were included in the study and those who were seriously ill to respond to the questionnaire during the data collection were excluded from the study

Sample size determination

Sample size was estimated using single population proportion with the following assumptions

Desired precision (d) = 5%, 95 % confidence interval, Proportion of risky sexual behavior from previous study.

$$n = \frac{(Z_{1-\alpha/2})^2 p (1-p)}{d^2}$$

Sample size (n)=384, since the multi stage sampling method was employed design effect of 1.5 used to maintain heterogeneity down through the stage so that the calculated sample size was 576 adding 10 % non response; the final estimated sample size was 634.

Sampling technique

A multi-stage sampling technique was employed to select the study subjects. Arjo Gudetu town has 2 kebeles and 11 zones. Out of these six zones were selected using lottery method. Each zones contributed the sample proportion to size. Then picking a house on random for the initial household from each randomly selected zones, the final households with adolescents was selected on systematic random sampling. An eligible adolescent from each selected household was interviewed outside the house or in private place. For households with more than one adolescent only one was selected randomly. In the absence of adolescents in sampled household, interviewer jumped to the next house. Moreover, in occasions when the sampled women were not accessed for absence, revisit was endeavored for interviewing to lessen the non-response rate.

Data collection methods and tools

Data were collected using pretested structured interviewer administered questionnaire adopted from related literatures and WHO sexual and reproductive health questionnaires. Initially questionnaires was developed in English then translated to local language (Afaan Oromo). Before the actual data collection, the questionnaire was pre-tested on 5% (32 adolescents) of sample in Diga town on similar populations and amendment was made.

Data processing and analysis

The collected data was cleaned, coded and entered into SPSS Version 25. The data was also explored again for inconsistencies and missing values. Descriptive statistics such as frequencies, proportions, as well as mean and standard deviation were computed and presented by narration, tables, charts and figures. Abivariate analysis was used to identify candidate variables for final multivariate logistic regression model. Variable having p-value less than 0.25 was considered for multi-variable analysis. Enter with 0.1 probability removal was used to develop the model. Then multivariable analysis was performed to determine the independent associated factor with dependent variable. Statistical significance will be considered at p-values < 0.05 and adjusted odds ratio (AOR) of 95% confidence interval (95% CI).Goodness of fit of the final model was checked using Hosmer Lemeshow test of goodness of fit considering good fit at P-value ≤ 0.05 and model omnibus likelihood test < 0.05.

Ethical consideration

Ethical clearance was obtained from Wollega University, School of graduate studies Ethical Review committee. Permission for conducting the study was secured from the Arjo Gudetu town Health office. Written consent was obtained from all the study participants after they had briefed about the objectives of the study.

Result

Social demographic characteristics of Adolescents in Arjo Gudet town

A total of 602 respondents were participated in the study making response rate of 94.9%. Out of 602 respondents 313(52%) of the study participants were males and mean age of the respondents were 14.81 (SD ± 2.7). More than one third, 248(41.2%) adolescents were between the age ranges of 17 to 19 years. Majority of the respondents were Orthodox 268 (44.5%) and Protestant 257 (42.8) in religion. The ethnicity of 410(68.1%) of respondents were Oromo followed by Amhara 142(23.6%). Regarding marital status 572(95%) of respondents were single. About 435(72.3%) of respondents live with their father and mother (Table 1).

Sexual behaviours of the Adolescents in Arjo Gudetu town

Two hundred four (33.8%) of the study participants ever had sexual intercourse; Out of which 200 (98%) were sexually active during the last 12 months and 145 (72.5%) of them had multiple sexual partner in the last 12 months. The mean age of sexual initiation was 15.31 (± 1.207) years.

Among the respondents reported to have sexual intercourse ever; 150 (74%) had first sex with steady boy/girlfriend. Early sexual resumption was 106(56.9%) and 80(43%) among male and female adolescents respectively. The reason reported by majority 84(41.2%) respondents to initiate sex was peer pressure (Table 2) (Figure 1).

Risk sexual behaviours among Adolescents in Arjo Gudetu town

The overall risky sexual practice in this study area was 25.7%. Among respondents reported to have ever had sexual experience, most 145 (72.5%) of them had multiple sexual partner in the past 12 months. More than half of sexually active respondents, 91 (53.5%) did not use condom consistently.

Socio demographic characteristics	Category	Frequency	Percentage
Sex	Male	313	52
	Female	289	48
Age	13-Oct	161	26.7
	14-16	193	32.1
	17-19	248	41.2
Religion	Orthodox	268	44.5
	Protestant	258	43
	Muslim	35	5.8
	Catholic	13	2.2
	Wakefata	27	4.5
Ethnicity	Oromo	410	68.1
	Amhara	142	23.6
	Gurage	21	3.5
	Tigre	20	3.3
	Gumuz	9	1.5
Occupation	Student	521	86.5
	Non-governmental work	69	11
	Governmental or private employee	12	2
Marital status	Single	572	95
	Married	25	4.2
	Divorced	5	0.8
Educational status of	Can't read and write	3	0.5
Respondents	Can read and write	7	1.2
	Primary school(1-8)	453	75.2
	Secondary school(9-12)	124	20.6
	College and above	15	2.5
Average monthly income of the family in birr Ethiopian Birr) (ETB)	<3614	523	86.9
	>=3614	79	13.1
Living attachment	Father and mother	435	72.3
	Mother / father only	73	12.1
	Relatives	43	7.1
	Spouse	22	3.7
	Friends/ Alone	29	4.8

Table 1: Socio demographic characteristics of Adolescents in Arjo Gudetu town, August, 2019.

Characteristics	Category	Frequency	Percentage (%)
Participants ever had sexual experience(n=602)	Yes	204	33.9
	No	398	66.1
Age at first sex(n=204)	<18 years	186	91.2
	>=18 years	18	8.8
First sexual partner(n=204)	Steady boy/girlfriend	150	74
	Commercial sex worker	22	10.7
	Husband/wife	27	13.2
	Older age	3	1.5
	Casual/unknown person	2	1
At least one sexual practice in the past 12 months	Yes	200	98
	No	4	2
Number of sexual partners in the past 12 months(n=200)	One	55	27.5
	Multiple	145	72.5
Condom use in the last 12 months in any sex encounter	Yes	159	79.5
	No	41	20.5
Frequency of condom use	Always	52	30.6
	Inconsistent	91	53.5
	Did not use at all	27	15.9

Table 2: Sexual behaviors of Adolescents in Arjo Gudetu town, August, 2019.

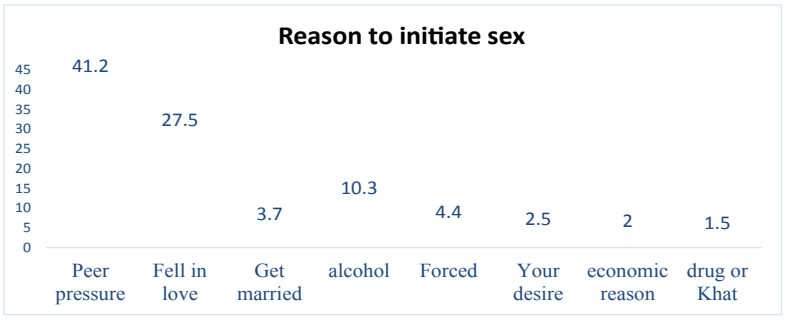

Figure 1: Reasons mentioned for the first sexual exposure among adolescents in Arjo Gudetu town, August, 2019.

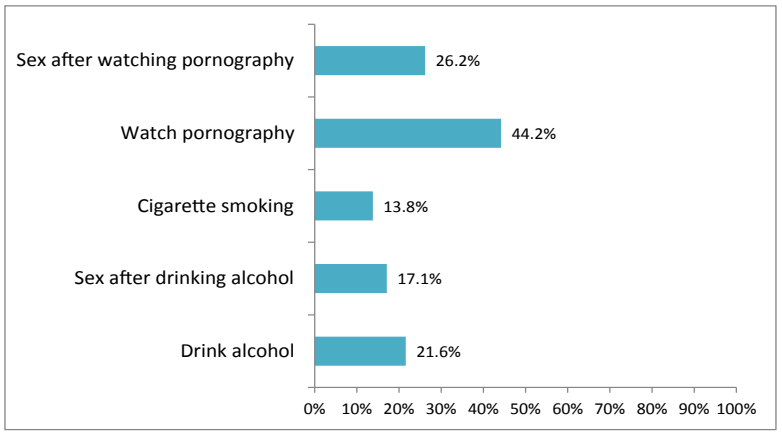

Figure 2: Reason for risky sexual behaviors among adolescents in Arjo Gudetu town, Agust, 2019.

Table 3: Multivariate logistic regression conducted between socio demographic factor and risky sexual behaviors among adolescents in Arjo Gudetu town, West Ethiopia, August 2019.

Variable	Category	Risk sexual		Crude OR	Adjusted OR
		Yes	No	(95% CI)	(95% CI)
Age	13-Oct	11(5.5%)	189(94.5%)	1	1
	14-16	39(21.1)	146(78)	19.825(10.149-38.727) *	12.647(5.575-28.694) *
	17-19	1 05(53.6)	91(46.4)	4.320(2.751-6.783)	3.093(1.694-5.650) *
Sex	Male	97(32)	206(68)	1.786(1.225-2.603) *	1.517(1.308-1.867) *
	Female	58(20.9)	220(79.1)	1	1
Educational status of respondent	Can't read and write	2(66.7)	1(33.3)	0.412(0.036-4.655)	0.513(0.034-7.727)
	Can read and write	5(71.4)	2(28.6)	0.194(0.330-0.062)	1.330(0.158-11.159)
	Primary school(1-8)	87(20)	349(80)	3.307(2.189-4.995) *	2.036(1.096-3.784) *
	Secondary	61(45.2)	74(54.8)	1	1
	school(9-12)				
	/College and above				

Reason for risk sexual behaviour among Adolescents in Arjo Gudetu Town

One hundred thirty (21.6%) of the adolescents ever used alcohol where 103(17.1%) of them had sex after drinking alcohol in the last one year. Eighty three (13.8%) respondents smoked cigarette, one hundred thirty-eight reported to chew a khat. Regarding exposure to sexual explicit material like watching pornography, about 266(44.2%) participants watched pornographic materials and 131 (49.2%) them reported to have sex after watching it (Figure 2).

Factors associated with risk sexual behavior among adolescent in Arjo Gudetu town

In binary logistic regression, Age between 17-19, male sex, being student, daily laborer, educational status of respondents, being single was associated with risky sexual behavior.

Multivariate analysis was done to control confounding variable and to identify significant and independent variable associated with risky sexual behavior. Accordingly three variables were found to have association with risky sexual behavior determined at p-value less than 0.005.

Adolescents aged 17-19 years were three times [AOR=3.093(1.694-5.650) more likely practice risky sexual behavior compared to age between 10-13 years old. Adolescents attained only primary school [AOR=2.036 (95% CI: 1.096-3.784)] were twice more likely to practice risky sexual behavior compared to adolescents attained educational status of secondary and above. Male adolescents [AOR=1.517(1.308-1.867)] practice risky sexual behavior twice more likely than their female counter parts (Table 3).

Discussion

The study depicted that the overall risky sexual behaviour among adolescent was 155(25.7%). This result was higher compared to study done in Humera which showed that the prevalence of risky sexual behaviour 13.7%, but smaller than study done in Mizan which showed that the prevalence of risky behaviour 51.3% [12,13].This variation might be due to socio-demographic factors, study period or setting of the study.

About 33.9% of respondents had sexual encounter ever in this study are , which was in line with study done in Mizan, which showed that 34.42% had sexual encounter, but higher than finding from Arba Minch and Addis Ababa where 26.2% and 20.4% adolescents had sexual encounter respectively [7,13,14]. This might be due to the fact that significant number of adolescent in this study area use substances and watch at pornographic materials which is the signal for practicing risky sexual behaviour. Or the difference might be due to variation in study period .

The mean age at sexual resumption in this study area was 15.31 (±1.207) years. This finding was in line with study in Aksum, Arba Minch, Haramaya and Asella town [7,15,16,17].

Early sexual resumption was more among male adolescent than female and this finding was consistent with study in Pawe, western Ethiopia [18]. But this finding was not in line with study in Nekemte [19]. The difference might be due to variation in study setting Arjo Gudetu is smaller town than Nekemte city, which may affect life style of adolescent and make male adolescents to resume sex earlier than female adolescents.

In this study, majority (72%) of the adolescent had multiple sexual partners in the past 12 months. This finding was congruent with study done in Mizan(50.94%),Arba Minch(41%),Aksum(64.4%) and Asella (22.9%) [7,13,15,17]. This finding was higher than that of Oweri Municipal (13.4%) and Haramaya (18.5%) respectively. This difference might be due to variation socio demographic factors in study, study design or study period and area.

The study depicted that more than half of the respondents did not use condom consistently in the past 12 months. This result was in line with study in Haramaya which showed that 44.3% used condom inconsistently, but smaller compared to study done in Aksum (83.5%) [15,16]. This discrepancy might be due to difference in study design or setting of the study because this study was community based but that of Aksum was among University students. Among total respondents 53(8.8%) had sex with commercial sex worker ever. This finding was in line with study done in Arba Minch [20].

Adolescents aged between 17-19 years were three times more likely practice risky sexual behavior than adolescents aged between 10-13 years. This finding was in line with the finding from Meta-analysis and systematic review which showed adolescent aged 15-19 years were more likely to practice risky sexual behavior [21,22]. Educational status was another associated factor with risky sexual practice in this study area where adolescent attained secondary school and above are less likely to be engaged in risky sexual behavior. This finding was congruent with different studies [21,23].

Male were twice more likely to practice risky sexual behavior than females which was congruent with systemic reviews and meta analysis in Ethiopia which showed that being male is associated with risky sexual behavior than being male [8,23]. In this association between, peer pressure, religiosity, parental control, watching pornography and substance use with risky sexual behavior didn't established in the multivariate analysis. The relationship of risky sexual behavior and substance use was strong in many literatures [7,13,18,20,24,25].

Though this study came up with interesting and convincing finding, it has limitations. Firstly, the study used cross sectional study design which cannot set temporal relationship between risky sexual practice and risk factors. Secondly, the study used systematic sampling method which might have cyclic pattern during data collection and thirdly, the social desirability bias and sensitive issue related with risky sexual behavior.

Conclusion

This study finding noted that significant numbers of adolescents were engaged in risky sexual behaviors such as multiple sexual partners, early sexual debut, inconsistent use of condoms, and sex with risky partners. Age, sex, and educational status of respondents were the major predictors of risky sexual behavior among adolescent in this study area. Therefore, family, community, and religious leaders should advice and monitor adolescents and make transparent discussion related with sexuality and reproductive health. Health facility, professionals and other stakeholders should make information, education and communication accessible to adolescent. Further research need to be conducted to explore more about risky sexual behavior and associated factors in rural areas.

Declarations

Ethical Consideration

Ethical clearance was obtained from Wollega University, School of graduate studies Ethical Review committee. Permission for conducting the study was secured from the Arjo Gudetu town Health office. Written consent was obtained from all the study participants after they had briefed about the objectives and the aim of the research. Confidentiality of the information gathered was assured to the interviewee.

Competing interests

The authors declare that they have no conflicts of interest regarding the publication of the paper.

Consent for publication

Not applicable

Availability of the data and material

The corresponding author can make the required data and material whenever needed

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Authors' contributions

N D involved in the proposal development, analysis of the data, interpretation of the data, report writing, and manuscript preparation.

M G and M D involved in the preparation of the manuscript and reviewing the paper.

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