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Sexual violence and adverse reproductive health outcomes among youth females in North Shoa zone, Oromia, Ethiopia: A community-based cross-sectional study

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Abstract

Objective: The aim of this study is to assess the magnitude of sexual violence, its adverse reproductive health outcomes, and associated factors among female youth in the Northern Shoa zone, Oromia region, Ethiopia.
Methods: A community-based cross-sectional study design was employed among 590 female youth from 1 December to 30 January 2021. A multi-stage sampling technique and a pretested structured interviewer-administered questionnaire were used. The data were entered into EpiData version 3.1 and then transferred to SPSS 23 for analysis. Descriptive statistical analysis was done, and an association between an outcome variable and independent variables was examined in logistic regression models.
Results: According to the study, the respective rates of sexual violence and harmful sexual reproductive consequences were 20.7% and 11.9%. Sexual violence was significantly associated with alcohol consumption (adjusted odds ratio = 2.549, 95% confidence interval = (1.548, 4.195)) and childhood exposure to inter-parental violence (adjusted odds ratio = 1.66, 95% confidence interval = (1.002, 2.888)). Rural childhood residence (adjusted odds ratio = 0.037, 95% confidence interval = (0.007, 0.192)), fathers with college degrees (adjusted odds ratio = 0.037, 95% confidence interval = (0.013, 0.106)), and readiness for first sex (adjusted odds ratio = 0.073, 95% confidence interval = (0.028, 0.189)) were all independent predictors of adverse reproductive health outcomes.
Conclusion: In this study, young females frequently experience sexual violence and poor reproductive health outcomes. Alcohol consumption and having experienced parental conflict as a child were found to be risk factors for sexual violence, while residing contracts during childhood, the father's level of education, and willingness to engage in the first sexual encounter were linked to adverse reproductive health outcomes.

Keywords
Sexual violence, reproductive health outcome, youth female, Ethiopia

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Introduction

Global health issues are raised by the adverse sexual reproductive of outcomes on female youths' ability to reproduce. Regardless of the perpetrator's relationship to the victim, sexual violence is defined as "any sexual act, attempted sexual act, unwanted sexual comments or advances, acts to traffic, or otherwise directed, against a person's sexuality using coercion, in any setting, including but not limited to home and work."[1] In the world, 33% of female youths between the ages of 15 and 24 years are sexually exploited.[2] Young

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people are more susceptible to poor outcomes in sexual and reproductive health. As a result of sexual violence, they are more likely to get sexually transmitted diseases (STDs), conceive inadvertently, and undergo a risky abortion.[3]

Most adolescent pregnancies in many parts of Sub-Saharan Africa result from result of unplanned and unprotected sexual behavior and are therefore mostly unwanted.[4] Preterm birth, abortion, low birth weight, and stillbirth are all outcomes of sexual violence during pregnancy in addition to having an effect on the mother's reproductive health.[5]

Violence against women is a common occurrence in Ethiopian households, both in the urban and rural areas. According to surveys conducted in Ethiopia, 35% of women who had ever been married had at some point in their life been the victims of physical, emotional, or sexual abuse by their husband or partner. According to the Central Statistical Agency,[6] 24% of women report experiencing emotional abuse, compared to 25% who claim physical abuse and 11% who report sex assault.

Despite improvements in youth health, sexual assault, unintended pregnancy, unsafe abortion, and sexually transmitted infections (STIs) like HIV still cause high rates of maternal injury and mortality in young women in Ethiopia.[3] However, notably in the Oromia region of North Shewa, the extent of sexual violence against female youth and its associated detrimental effect on reproductive health are not well recognized. Therefore, figuring out how big it is and identifying the factors that contribute to it can help with developing prevention and control strategies to manage it. The aim of this study is to assess the prevalence, contributing factors, and outcomes of adverse reproductive health among young females in the Northern Shewa zone.

Methods and material

Study design, period, and area

A community-based quantitative cross-sectional survey was conducted between 1 December and 30 January 2021, in the North Shewa zone of Oromia Regional State, Ethiopia. Fiche, the zone's capital city, is located 112 km north of Addis Ababa. The Amhara Regional State in the north, the East Shewa Zone in the east, the Addis Ababa Special Zone in the south, and the West Shewa Zone in the west are the borders of the zone. There are 1,639,587 people living in the zone's 14 districts, 820,595 of them are men and 818,992 of whom are women. In North Shewa, the rural population makes up 88% (1,447,330) of the total population, while the urban population makes up 12% (192,105) (zonal municipality).

Study population

All female youths who had resided in the selected districts in the North Shoa zone for more than 6 months comprised the research population.

Sample size and sampling technique

The sample size was calculated using the single population proportion formula by considering the proportion (p) at 37.4%,[7] 95.0% level of confidence (CL), 5% margin of error (d), 10% non-response rate, and design effect of 1.5 were used to get the actual sample size of 594. Multi-stage sampling technique was used to select study participants with the assumption of homogeneous population.

Sampling procedure

By lottery methods, six districts were chosen from 13 districts in the North Shewa zone. To choose study participants from households within each kebele, systematic random selection was performed, with the health extension workers' folder containing documentation of female reproductive groups serving as a sample frame. If more than one female youngster lived in the same house, a random selection was made to select one female.

Inclusion and exclusion criteria

Inclusion criteria

- All youth females who are residing in study area for more than 6 months.
- Female age 15–24 years old.

Exclusion criteria

- Seriously ill females with major health problems that affect data collection process were excluded from the study.

Operational definitions

Sexual violence. A female is considered sexually violated if she has experienced sexual harassment, attempted rape, or rape.

An adverse reproductive health outcome. It occurs when a female has had at least one type of adverse reproductive health outcome (unwanted pregnancy, unsafe abortion, STI, and still birth) during her lifetime.

Kebele. It is the smallest administration unit in Ethiopia.

Data collection tool and procedure

A structured interviewer-administered questionnaire, which was pretested on 5% of the total population prior to data collection, was adapted after reviewing different literature.[8–10] The tool contains socio-demographic characteristics, sexual history, substance use, sexual violence, and adverse reproductive health outcome. Twelve diploma-holding female nurses were recruited for data collection,

Table 1. Socio-demographic characteristics of the study participants North Shoa zone, Oromia, Ethiopia, from 1 December to 30 January 2021 (n = 590).

Variables	Category	Frequency	%
Age	⩾20	216	36.6
	⩽19	374	63.4
Childhood residency (<12 years)	Urban	220	37.3
	Rural	370	62.7
Educational level	Primary school	174	29.5
	Secondary school	166	28.1
	College/university	250	42.4
Marital status	Married/have boy friend	354	60.0
	Neither married nor have boyfriend	236	40.0
Educational status of father	Illiterate	213	36.1
	Literate	377	63.9
Educational status of mother	Illiterate	274	46.4
	Literate	316	53.6
Religion	Orthodox	504	85.4
	Protestant	74	12.5
	Other*	12	2.0
Perceived family control	Tight	307	52.0
	Average	245	41.5
	Loose/free	38	6.4
Witnessed inter-parental violence as child	No	174	29.5
	Yes	416	70.5

*Muslim.

and three Bachelor of Science nurses were also recruited as supervisors. All data collectors and supervisors were oriented and trained on purpose, of the study, confidentiality and how to approach and forward questions to the participants, and check the data 1 day prior to the survey (see the Supplementary Survey).

Statistical analysis

Before being transferred to SPSS version 23, the data were coded, modified, cleaned, and entered into EpiData version 3.1. The descriptive data analysis was done, with the results presented in the form of frequency, summary statistics, tables, and graphs. An odds ratio with a 95% confidence interval and a two-tailed P-value was used to determine the presence and strength of the association. To control the confounding factor among the variables, variables having a P-value of 0.25 in the bivariate analysis were included in a multivariable logistic regression analysis. If the P-value was less than 0.05, statistical significance was declared.

Results

Socio-demographic characteristics of the respondents

The study included 590 young females, resulting in a 99.3% response rate. The average female was 20.27 years old (standard deviation = 2.496). The great majority of responders (85.4%) identified as Orthodox Christians, and 60% of women are married or have boyfriends. Approximately 62.7% of survey participants grew rose in rural settings. More than half (52%) of female youngsters say their families have tight control over them, while only 6.4% believe their families have poor control (Table 1).

Sexual experience of study participants

Three hundred twelve (52.9%) of the total participants admitted to having had sexual intercourse. One hundred twenty-two (39.51%) started having sex before the age of 18 years, whereas 190 (60.9%) started when they were 18 or older. 39.1% of individuals who had sexual experience said they had had more than one sexual partner in their lifetime. Out of the 312 participants who had sexual experience, 150 said their first sexual encounter was against their will.

Prevalence of sexual violence among the study participants

Sexual violence was common 122. (20.7%). One hundred fourteen (19.3%) of the total survey participants reported having experienced sexual harassment in their lifetime. A considerable proportion of study participants, 84 (14.2%), had been victims of attempted rape, while 60 (10.2%) have been raped. Harassment is the most common type of sexual violence, accounting for 114 (19.3%) (Table 2).

Table 2. Prevalence of sexual violence in life time among the study participants, North Shoa zone, Oromia, Ethiopia, from 1 December to 30 January 2021 (n = 590).

Variables	Category	Frequency	%
Harassment	Yes	114	19.3
	No	476	80.7
Attempted rape	Yes	84	14.2
	No	506	85.8
Completed rape	Yes	60	10.2
	No	530	89.8
Sexual violence	Yes	122	20.7
	No	468	79.3

Prevalence of adverse reproductive health outcome

According to this study, 11.9% of women have experienced adverse reproductive health outcomes. Unintended pregnancy, abortion, still birth, and the incidence of sexually transmitted diseases were reported by 56 (9.5%), 37 (6.3%), 8 (1.4%), and 34 (5.8%) of respondents, respectively (Table 3).

Factors associated with sexual violence among study participants

As a child, witnessing inter-parental violence and drinking alcohol were found to be highly connected to sexual violence. As a result, young females who drink alcohol are more likely to face sexual violence than others (adjusted odds ratio (AOR) = 2.549, 95% confidence interval (CI) = (1.548, 4.195)), whereas females who reported inter-parental violence as children are more likely to face sexual violence later in life (AOR = 1.66, 95% CI = (1.002, 2.888)) (Table 4).

Factors associated with adverse reproductive health outcome

Females who grew up in rural areas were less likely to have adverse reproductive health outcomes than their urban counterparts (AOR = 0.037, 95% CI = (0.007, 0.192)). Participants with literate fathers were less likely to have adverse reproductive health outcomes (AOR = 0.037, 95% CI = (0.013, 0.106)). Youth females who were willing during their first sexual encounter had a lower risk of developing an adverse reproductive health outcome (AOR = 0.073, 95% CI = (0.028, 0.189)) (Table 5).

Discussion

The study assessed the magnitude and factors associated with adverse reproductive health outcomes and sexual violence among female youth. Accordingly, sexual violence was found to be 20.7%, while 11.9% of them have experienced adverse reproductive health outcomes. Of those 20.7% of study subjects, 19.3% faced sexual harassment, 14.2% had encountered attempted rape, and 10.2% had faced completed rape. The study also revealed that adverse reproductive health outcomes (intended pregnancy, abortion, still birth, and the incidence of sexually transmitted diseases) were reported by 56 (9.5%), 37 (6.3%), 8 (1.4%), and 34 (5.8%) of respondents, respectively. Place of residence during childhood, the father's educational status, and willingness to engage in the first sexual intercourse were all independent predictors of poor reproductive health outcomes. Likewise, drinking alcohol and witnessing inter-parental violence during childhood were significantly associated with sexual violence.

Table 3. Prevalence of adverse reproductive health outcome among the study participants, North Shoa zone, Oromia, Ethiopia, from 1 December to 30 January 2021 (n = 590).

Variables	Category	Frequency	%
Unintended pregnancy	Yes	56	9.5
	No	534	90.5
Abortion	Yes	37	6.3
	No	553	93.7
STD	Yes	34	5.8
	No	556	94.2
Still birth	Yes	8	1.4
	No	582	98.6
Adverse reproductive health outcome	Yes	70	11.9
	No	520	88.1

STD: sexually transmitted disease.

This study shows that 20.7% of study subjects have encountered at least one type of sexual violence. It is lower than study conducted among female university students in Ethiopia where sexual violence was found to be 45.4%,[8] but higher than the finding from 2016 Ethiopian demographic health survey[6] where sexual violence is around 10%. This difference could be due to the study setting, where the first one was conducted among university students, while the latter one was a survey among any age group of females, but this study only focused on female youth in the community.

Rape, one of the most common forms of sexual violence, was reported by 10.2% of participants. This was correspondent with the findings of Madda Walabu[9] and Addis Ababa Universities[10] that shows 10.9% and 12.7% rape, respectively. However, it was higher than the findings from Dabat[11] and Debark[12] high school students, where the finding fell between 5.1% and 8.8%. This might be due to the differences in age and socio-cultural factors among study participants.

In this study, 114 (19.3%), 84 (14.2%), and 60 (10.1%) study participants have been subjected to harassment, attempted rape, and completed rape, respectively. This study result is almost similar to the study result of Debre Berhan University,[13] which found attempted rape and rape at 12.8% and 9.8%, respectively. However, sexual harassment is very

Table 4. Bivariate and multivariate of factors associated sexual violence among study participants North Shoa zone, Oromia, Ethiopia, from 1 December to 30 January 2021 (n = 590).

Variables	Sexual violence		COR (95% CI)	AOR (95% CI)	P-value
	Yes (%)	No (%)			
Marital status					
Married/boy friend	66 (18.6%)	288 (81.4%)	1	1	
No husband/boyfriend	56 (23.7%)	180 (76.3%)	0.74 (0.493, 1.101)	0.39 (0.379, 3.981)	0.731
Family control					
Tight	72 (23.5%)	235 (76.5%)	1	1	
Average	43 (17.6%)	202 (82.4)	1.54 (0.944, 2.195)	1.46 (0.822, 2.604)	0.195
Loose/free	7 (18.4%)	31 (81.6%)	1.68 (0.573, 3.212)	1.61 (0.574, 6.948)	0.324
Discussed sexual issues					
No	50 (16.2%)	259 (83.8%)	1	1	
Yes	72 (25.6%)	209 (74.4%)	1.43 (1.374, 3.84)	1.57 (0.948, 2.612)	0.079
Alcohol consumption					
No	58 (25.2%)	172 (74.8%)	1	1	
Yes	64 (17.8%)	296 (82.2%)	3.56 (1.043, 4.331)	2.55 (1.548, 4.195)	0.000**
Age at first sexual (years)					
<18	19 (15.6%)	103 (84.4%)	1	1	
⩾18	43 (22.6%)	147 (77.4%)	1.13 (0.348, 1.144)	0.76 (0.731, 1.881)	0.509
Witnessed inter-parental violence as child					
No	28 (16.1%)	146 (83.9%)	1	1	
Yes	94 (22.6%)	322 (77.4%)	1.01 (0.413, 1.046)	1.66 (1.002, 2.888)	0.049**

COR: crude odds ratio; CI: confidence interval; AOR: adjusted odds ratio.
**Significant at P-value 0.05.

much higher than in this study. This difference could be due to a study population difference where university students are more vulnerable to sexual violence than youth female community. Because university student lacks family protection since they move away from family, and moreover, they are more subjected to harassment from their professor.

Witnessing inter-parental violence as a child and alcohol intake were found to be positively associated with sexual violence.[8,14] In congruent with this, this study finds that witnessing inter-parental violence as a child (AOR = 1.701, 95% CI = (1.002, 2.888)), as well as alcohol consumption (AOR = 2.549, 95% CI = (1.548, 4.195)), were significantly related to sexual violence. It was also shown in studies undertaken in Madda Walabu[8] and Hawassa[14,15] among college students that witnessing inter-parental violence as a child increased the risk of experiencing sexual violence. A young female who witnesses her mother being assaulted by her husband is likely to feel that threats and violence are commonplace in relationships.[16]

The overall prevalence of adverse reproductive outcome was found to be 70 (11.9%). This was lower than the study result from among married women in Northwest Ethiopia.[7] This difference might be due to a study population difference, as the latter one was conducted among married women, unlike this study, which was conducted among young females. The prevalence of unintended pregnancy was 9.5% among female youth. This finding is lower than the prevalence of unintended pregnancy in Northwest Ethiopia (13.7%)[15] and in Northeast Ethiopia (23.5%).[16] This disparity could be explained by the fact that this study is focused on young females who have not yet married, whereas earlier studies have focused on married and pregnant women. The prevalence of abortion (6.3%) in this study is found in the range of country-level prevalence. The overall prevalence of abortion in Ethiopia was 8.9%, ranging from 4.5% in Benishangul to 11.3% in Tigray regions, and it is a little lower than the prevalence in the Oromia region (8.9%).[17] Females who were willing during their first sexual encounter were less likely to develop an adverse reproductive health outcome. This finding is in line with a study conducted in Zimbabwe where forced first sex (sexual violence) was associated with a history of a negative outcome.[18]

The findings of this study may aid in the development of prevention and control strategies to combat sexual violence and its negative reproductive consequences. Furthermore, this research is expected to contribute to filling a research gap in the studied area and may also act as a baseline for future research.

The limitations of this study include social desirability bias; as it an interviewer-administered questionnaire, which may have influenced the results. The study participants may withhold certain details due to their humiliation over what happened to them. Other limitation is its cross-sectional approach, which might make it difficult to identify cause and effect of relationships.

Table 5. Factors associated with adverse reproductive health outcome among study participants North Shoa zone, Oromia, Ethiopia, from 1 December to 30 January 2021 (n = 590).

Variables	Adverse reproductive health outcome		COR (95% CI)	AOR (95% CI)	P-value
	Yes (%)	No (%)			
Childhood residency					
Urban	14 (6.4%)	206 (93.6%)	1	1	
Rural	56 (15.1%)	314 (84.9%)	0.38 (0.207, 0.702)	0.04 (0.007, 0.192)	0.000**
Educational level					
Primary school	28 (16.1%)	146 (83.9%)	1	1	
Secondary school	18 (10.8%)	148 (89.2%)	1.58 (0.836, 2.975)	1.47 (0.445, 5.752)	0.472
College/university	24 (9.6%)	226 (90.4%)	1.81 (1.008, 3.237)	1.12 (0.375, 3.359)	0.836
Age category					
⩾20	34 (15.7%)	182 (84.3%)	1	1	
⩽19	36 (9.6%)	338 (90.4%)	1.75 (1.062, 2.898)	1.32 (0.514, 3.385)	0.565
Fathers education					
Illiterate	16 (7.5%)	197 (92.5%)	1		
Literate	54 (14.3%)	323 (85.7%)	0.49 (0.271, 0.872)	0.04 (0.013, 0.106)	<0.001**
Discussion on sexual matters with parents					
No	32 (10.4%)	277 (89.6%)	1		
Yes	38 (13.5%)	243 (86.5%)	0.74 (0.448, 1.219)	0.72 (0.249, 2.098)	0.550
Willingness at first sexual intercourse					
No	8 (5.3%)	142 (94.7%)	1	1	
Yes	38 (23.5%)	124 (76.5%)	0.18 (0.083, 0.409)	0.07 (0.028, 0.189)	0.000**

COR: crude odds ratio; CI: confidence interval; AOR: adjusted odds ratio.
**Significant at P-value 0.05.

Conclusion

The study participants had more adverse reproductive health outcomes and sexual violence. The place of childhood residence, the educational status of the father, and the desire to engage in the first sexual intercourse were all independent predictors of poor reproductive health outcomes. Similarly, drinking alcohol and witnessing interparental violence as a youngster were significantly linked to sexual violence.

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Author contributions

All authors collected analyzed and interpreted data; drafted the manuscript for important intellectual content. The authors reviewed and revised the draft further and approved the final version for submission.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

The protocol of this study for subject recruitment process and participation in the study adhered to the Declaration of Helsinki's guidelines and an ethical approval letter was obtained from The Salale University institutional research ethics review board (SLU-IRB) committee pleased the study protocol has approved with reference no. SLU-IRB-675/2021.

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Informed consent

Written informed consent was obtained from all subjects and legally authorized representatives (in case of minors) before the study initiation. Participation was completely voluntary, and the participants were free to withdraw from the study at any time without any consequence. Confidentiality of all information has been maintained.

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Supplemental material

Supplemental material for this article is available online.

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