SEXUAL ASSAULT AND ASSOCIATED FACTORS AMONG WOMEN: A CROSS-SECTIONAL STUDY IN HAWASSA UNIVERSITY COMPREHENSIVE SPECIALIZED HOSPITAL, ETHIOPIA

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ABSTRACT

BACKGROUND: Sexual assault is a major form of sexual violence affecting one out of every five women in the world and it has many consequences including sexually transmitted infections, posttraumatic stress disorder, and risk of unintended pregnancy. Thus, this study was aimed to assess the magnitude, complication, and factors associated with sexual assault among women who visited the gynecologic outpatient department of Hawassa University Comprehensive Specialized Hospital.

METHODS: Cross-sectional study was conducted from January 1 to October 30, 2019. The self-administered questionnaire developed from "WHO multi-country study on women health" and from "sexual violence medical evaluation certificate format" was used to collect data. Descriptive analysis was done on sexual assault-related characteristics and binary and multivariate logistic regression analyses were done to identify factors associated with sexual assault.

RESULTS: The prevalence of sexual assault was 10.8% (n=43). Some 79.1% (n=34) of survivors were under the age of 18 years. 25% (n=7) of the survivors tested for pregnancy were positive and some 7% (n=3) of each were positive for Hepatitis B and Trichomonas vaginalis. A woman who was less than 18 years old [aOR=10.7, 95%CI (3.37, 33.85)], unmarried [aOR=9.2, 95% CI (2.11, 40.42)], had a primary level of education [aOR=8.9, 95% CI (2.37, 33.06)] and a monthly income less than 1500 birr [aOR=6.7, 95% CI (1.54, 29.50)] had higher odds of experiencing sexual assault than their counterparts who were adult, married, secondary- or higher level of education and a monthly income more than 1500 birr.

CONCLUSIONS: In this study, age, marital status, monthly income, and educational level were significantly associated with sexual assault. Creating awareness at school, family, and community level is vital to prevent the consequences of sexual assault.

KEYWORDS: Women, Pregnancy, Sexual assault, Sexually transmitted infection.

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INTRODUCTION

Sexual violence is defined as a sexual act committed against someone without the person's freely given consent [1]. Sexual assault is a major form of sexual violence affecting women and it includes rape, attempted rape, sexual abuse, and sexual exploitation [2].

Globally 1 in 5 women, experienced completed or attempted rape during their lifetime [1, 2]. According to a 2013 WHO analysis conducted using existing data from over 80 countries, 1 in 3 women has experienced physical and/or sexual violence. Large population-based surveys indicated a lifetime prevalence of 13-39% sexual violence among women and 3% among men though vulnerable groups are not included in the study [2, 3].

In Ethiopia, according to the 2016 DHS report, thirty-four percent of ever-married women age 15-49 have experienced spousal physical, sexual, or emotional violence. Physical and emotional violence were experienced by 24% each, and sexual violence by10% [4].

Consequences of a sexual assault may be manifested biologically, psychologically, and sociologically [5]. Medical consequences of sexual assault include sexually transmitted infections; mental health conditions, including posttraumatic stress disorder; and risk of unintended pregnancy in reproductive-aged survivors of sexual assault [6].

The risk of sexual assault varies among individuals and some groups of individuals are at a higher risk of sexual assault. Women who are young, poor, living in social housing, in poor health, single and separated or divorced, migrant and trafficked women and those involved in the sex industry are more likely to encounter sexual violence [7]. Sexual assault is currently an issue at the forefront of public life but there are limited institutional based studies in Ethiopia. Although there are some community based studies done covering small areas in Sidama Zone, there is no study conducted in Hawassa University Comprehensive Specialized Hospital to investigate the magnitude and complications of sexual assault. Thus, This study was aimed to assess the magnitude of sexual assault, associated complications, and risk factors.

SUBJECTS AND METHODS

Study area and period: The study was conducted at the Gynecologic Outpatient Department of Hawassa University Comprehensive Specialized Hospital from January 1 to October 30, 2019.

Study design: Cross-sectional study design was applied.

Study participants: Women who visited the gynecologic outpatient department of Hawassa university's comprehensive specialized hospital for service care.

Exclusion criteria: Women with psychiatric and critical illnesses were excluded from the study.

Sample size determination: The desired sample size was calculated using a single population proportion formula.

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

Where

n = the minimum sample size.

Zα/2 = 1.96 for 95% confidence level.

d = Margin of error = 0.04

p = Proportion of sexual assault.

Based on a study conducted at selected hospitals in Tigray region [8], the prevalence of sexual assault was 12.7% (0.127). Thus, considering 1.5 design effect and 5% non-response rate, the total sample size was:

$$n = \frac{(1.96)^2 \times 0.127(1-0.127)}{(0.04)^2} = 266$$

n = (266 + 13) x 1.5 = 418

Sampling technique and procedure: The study participants were selected by systematic random sampling. Data obtained from the OPD registry book showed that ten months before the study period, around 5000 clients visited Hawassa University Comprehensive Specialized Hospital Gynecologic Outpatient Department. Considering six months of data collection, a total population of

3000 was used to calculate the sampling interval. Thus, by dividing the total population by the sample size, the sampling interval was found to be 8. After random selection of the first sample, every 8th person was included in the study.

Data collection: Self-administered questionnaire adapted from WHO multi-country study on women health and from sexual violence medical evaluation certificate was used to collect data. Data for minors and children were obtained from their attendants. The data was collected by trained year two residents during working hours and the completeness of the data was consistently checked by the principal investigators.

Data processing and analysis: Each questionnaire was checked for completeness and consistency and cleaned. The data was analyzed using SPSS version 21. Descriptive analysis was done on socio-demographic characteristics and sexual assault-related characteristics. Binary and multivariate logistic regression analyses were done to identify factors associated with sexual assault. A level of $p < 0.05$ was considered statistically significant.

Ethical consideration: Ethical clearance and approval were obtained from the ethical review board of Hawassa University College of Medicine and Health Sciences. Permission to conduct the study was asked and obtained from the Hospital chief clinical service officer. Written informed consent was obtained from the study participants and parents or guardians for those whose age was below 18 years. Any refusal of the parents, guardians, or child to participate in the study was respected and confidentiality of response was maintained throughout the study.

Operational definition

Sexual violence: any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic a person's sexuality, using coercion, threats of harm or physical force, by any person regardless of relationship to the survivor, in any setting, including but not limited to home and work environments.

Sexual assault: a major form of sexual violence affecting women and it includes rape, attempted rape, sexual abuse and sexual exploitation.

Rape: forced physical penetration of the vulva or anus using the penis or other body parts or objects and any attempt to do so is called attempted rape.

Sexual abuse: other non-consensual sexual acts, not including rape or attempted rape and includes acts performed on a minor.

Perpetrator/assailant: a male or female, group or institution that inflicts, supports, or condones.

Survivor/victim: a person who has lived through an incident of sexual assault. Survivor is a more preferred term as it has a positive connotation.

RESULTS

Socio-demographic Characteristics of the Study Participants

Table 1 summarizes the socio-demographic characteristics of the study participants. A total of 399 clients have participated in the study. The mean age of the respondents was 28.97 ± 10.61 and about 79.1% (n=34) of the survivors were under the age of 18 years. Most of the survivors were unmarried (90.7%, n=39), primary school attendees (88.4%, n=38), and average monthly family income of less than 1500 birr (60.5%, n=26).

Table 1: Socio-demographic characteristics of the study participants, Hawassa University Comprehensive Specialized Hospital, Hawassa, Ethiopia, 2019.

Variables	Categories	Sexual assault	
		Yes, n (%)	No, n (%)
Age	<18 years	34 (79.1)	36 (10.1)
	≥ 18 years	9 (20.9)	320 (89.9)
Marital status	Married	4 (9.3)	304 (85.4)
	Unmarried	39 (90.7)	52 (14.6)
Education status	Primary school	38 (88.4)	119 (33.4)
	High school and above	5 (11.6)	237 (66.6)
Religion	Orthodox	13 (30.2)	107 (30.1)
	Muslim	5 (11.6)	97 (27.2)
	Protestant	25 (58.1)	152 (42.7)
Residence	Urban	23 (53.5)	221 (62.1)
	Rural	20 (46.5)	135 (37.9)
Monthly income	< 1500 birr	26 (60.5)	78 (21.9)
	≥ 1500 birr	17 (39.5)	278 (78.1)

Characteristics of Sexual Assault among the Study Participants

The overall prevalence of sexual assault was 10.8% (n=43). Rape was the most prevalent type of sexual assault (72.1%, n=31) followed by rape attempts (25.6%, n=11). About 14.3% (n=7) of the survivors had a previous history of sexual assault and 62.8% (n=27) were assaulted by someone known by the survivor or their family. 83.7% (n=36) of the survivors were assaulted by a single assailant and 60.5% (n=26) of sexual assault cases happened in the assailant's home. The majority of the survivors (55.8%, n=24) came to the hospital after 5 days (Table 2). However, the duration of presentation to the hospital after sexual assault ranges from 1 day to 120 days with a mean duration of 17 days.

Table 2- Characteristics of sexual assault among the study participants, Hawassa University Comprehensive Specialized Hospital, Hawassa, Ethiopia, 2019.

Characteristics	Categories	Frequency (n=43)	Percentage
Type of sexual assault	Rape	31	72.1
	Rape attempt	11	25.5
	Sexual abuse	1	2.4
Previous history of sexual assault	Yes 7	14.3	
	No	36	83.7
Place of sexual assault	Own Home	13	30.2
	Assailants home	26	60.5
	Other places	4	9.3
Perpetrators relationship	Stranger	16	37.2
	Known by the survivor	27	62.8
Number of assailants	1 36	83.7	
	≥ 2 7	16.3	
Brought to the hospital by	Herself	3	6.9
	Family	26	60.4
	Police	14	32.7
Duration of presentation to the hospital	≤ 1 day	5	11.6
	2-3 days	9	20.9
	4-5 days	5	11.6
	≥ 6 days	24	55.8
Time of sexual assault	Day	22	51.2
	Night	21	48.8
Alcohol or drug use by assailants	Yes 10	23.3	
	No	33	76.7

Complications Associated with Sexual Assault and Emergency Service Provision

Table 3 shows the laboratory tests and sexual assault associated injuries among the survivors. The pregnancy test was done for 65.1% (n=28), HIV test for 90.7% (n=39), and STI screening for all of the cases. Among the survivors tested, 25.0% (n=7) of them were positive for pregnancy at the time of presentation and 7% (n=3) of each were positive for Hepatitis B and Trichomonas vaginalis, however, all tested survivors were negative for HIV test. Among sexual assault cases, 72.1% (n=31) and 32.6% (n=14) had sexual assault-associated genital injuries and non-genital injuries respectively.

Among the cases that were potentially eligible for emergency contraception, 46.7% (n=7) of them were provided with the service. Those survivors who came to the hospital within the first 72 hours after sexual assault (50%, n=7) were provided with post-exposure prophylaxis for HIV, and 74.4% (n=32) survivors were provided with STI prophylaxis (Table 4).

Table 3: Laboratory tests and sexual assault associated injuries among the study participants, Hawassa University Comprehensive Specialized Hospital, Hawassa, Ethiopia, 2019.

Variables	Categories	Frequency	Percentage
Pregnancy test (n=28)	Positive	7	25.0
	Negative	21	75.0
Screening test for STI (n=43)	Hepatitis B	3	7.0
	Trichomonas vaginalis	3	7.0
	Gonorrhea	1	2.3
	None	36	83.7
HIV test (n=39)	Positive	0	0.0
	Negative	39	100.0
Genital injury (n=43)	Fresh hymenal tear	19	44.2
	Old hymenal tear	9	20.9
	Perineal tear	3	7.0
	None	12	27.9
Non-genital injury (n=43)	Bruise	7	16.3
	Abrasion	4	9.3
	Laceration	4	9.3
	None	28	65.1

Table 4: Emergency care provision by the time of presentation to the hospital after sexual assault, Hawassa University Comprehensive Specialized Hospital, Hawassa, Ethiopia, 2019.

Variables	Response Options	Time of presentation to the hospital after sexual assault				
		≤ 1 day	2-3 days	4-5 days	≥ 6 days	Total (n=43)
Provisions of Emergency Contraceptive	Yes	0	6(66.7)	1(20)	0	7(16.3)
	No	5(100)	3(33.3)	4(80)	24(100)	36(83.7)
Provisions of post exposure prophylaxis for HIV	Yes	3(60)	8(88.9)	2(40)	1(4.1)	14(32.6)
	No	2(40)	1(11.1)	3(60)	23(95.9)	29(67.4)
Provisions of STI prophylaxis	Yes	3(60)	9(100)	4(80)	16(66.7)	32(74.4)
	No	2(40)	0	1(20)	8(33.3)	11(25.6)

Factors Associated with Sexual Assault among The Study Participants

Table 5 evaluates factors associated with sexual assault. Among the risk factors assessed in the study participants, being younger than 18 years old [aOR=10.7, 95% CI (3.37, 33.85)], and monthly income less of than 1500 birr [aOR=6.7, 95% CI (1.54, 29.50)] were significant determinant factors associated with sexual assault. In this study, being married was found to be less likely to be sexually assaulted. Unmarried women were about 9.2 times more likely to be sexually assaulted. In addition, being in primary school [aOR=8.9, 95% CI (2.37, 33.06)] was also significantly associated with sexual assault.

Table 5: Factors associated with sexual assault among the study participants, Hawassa University Comprehensive Specialized Hospital, Hawassa, Ethiopia, 2019.

Variables	Categories	Sexually assaulted		OR (95% CI)	aOR (95% CI)
		Yes	No		
Age	<18 years	34	36	33.6 (14.92, 75.60)	10.7 (3.37, 33.85)
	≥ 18 years	9	320	1.00	1.00
Relationship status	Married	4	304	1.00	1.00
	Unmarried	39	52	57.0 (19.55, 166.21)	9.2 (2.11, 40.42)
Education status	Primary school	38	119	15.1 (5.81, 39.54)	8.9 (2.37, 33.06)
	High school and above	5	237	1.00	1.00
Religion	Muslim	5	97	1.00	1.00
	Orthodox	13	107	2.4 (0.81, 6.85)	1.8 (0.16, 18.94)
	Protestant	25	152	3.2 (1.18, 8.62)	2.0 (0.21, 18.44)
Place of residency	Urban	23	221	1.00	1.00
	Rural	20	135	1.4 (0.75, 2.69)	1.5 (0.36, 6.14)
Monthly income	< 1500 birr	26	78	5.5 (2.82, 10.56)	6.7 (1.54, 29.50)
	≥ 1500 birr	17	278	1.00	1.00
Previous history of sexual assault	Yes	7	5	13.7 (4.12, 45.22)	14.9 (0.70, 319.48)
	No	36	351	1.00	1.00

DISCUSSION

The results of the present study showed a 10.8% (n=43) prevalence of sexual assault. Our result is comparable with previous studies conducted in different parts of Ethiopia. A 12.7% (n=117) rape prevalence was reported among women who visited Gynecologic Outpatient Departments of Selected Hospital in Tigray region [8]. Studies conducted among high school and university students in Ethiopia reported a prevalence of sexual violence ranging from 16.6% (n=55) to 37.3% (n=200) [9-11]. The most likely cause of the lower prevalence of sexual assault in this study may be due to poor reporting and disclosure of sexual assault due to various reasons including abduction and forced marriage which is becoming a common occurrence around the ouir study area.

Most of the sexual assault cases will end up with some sort of sexual and reproductive health problems like unwanted pregnancy, sexually transmitted infections, and other genital and non-genital injuries. The rate of pregnancy and sexually transmitted infection among sexual assault cases at the time of presentation in this study was comparable with the results of the study done at Jimma university comprehensive hospital [12]. However, in this study, among the survivors who were potentially eligible for emergency contraception and post-exposure prophylaxis for HIV, only a small number of survivors were provided with the service. This indicates that the coverage for these services in this institution is very low and the survivors didn't get proper care provision.

According to the WHO report, being a younger age is one of the risk factors for sexual assault [2]. Studies done in Jimma university comprehensive hospital, Adigrat hospital, and Mekelle University reported a similar finding [12-14]. Similarly, in the present study, being under the age of 18 years was significantly associated with sexual assault.

Our study showed that women with low monthly incomes were more likely to be a victim of sexual assault. Our finding was supported by the WHO report which indicated that factors like low socioeconomic status increase women's risk of sexual assault [2].

In this study, the educational status of primary school was significantly associated with being sexually assaulted. Our result was consistent with the study done among the female administrative staff of Mekelle University which reported that females with the educational status of secondary school or less were significantly associated with sexual violence [14].

In this study, being married was less likely to be associated with sexual assault. This finding was comparable with the study conducted in Butajira Town, South Ethiopia, and in Nairobi, Kenya which showed that being unmarried was significantly associated with sexual assault [9, 15]. However, our result was inconsistent with the WHO report which showed that one of the most important risk factors for women in terms of their vulnerability to sexual assault is being married or cohabiting with a partner [2]. This might be because most women in our country don't report sexual violence committed by their husbands.

CONCLUSION

In this study, the prevalence of sexual assault was high, and most of the survivors were under the age of 18 years. The common type of sexual assault was rape and most of the survivors had genital injuries. The overall provision of emergency contraception, post-exposure prophylaxis for HIV, and prophylaxis for STI were very low, even though screening tests were offered for most survivors. Age, Monthly income, educational level, and marital status were significantly associated with sexual assault.

RECOMMENDATIONS

Awareness should be created at school, family, and community level to prevent the problem of sexaual assault and it's associated complications. The hospital should provide training for care providers on the management of sexual assault cases.

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