Gender-Based Violence against Female Students of Debre Markos University, North-West Ethiopia: Mixed-Methods Study

Melese Girmaye Negero[1] Amanuel Alemu Abajobir[2] Selamawit Zewdu Salilih[3]

Abstract

Gender-Based Violence (GBV) affects between 10 and 70% of women worldwide, rape and domestic violence accounting for 10-50% healthy–years lost by women. School-based GBV represents a serious obstacle through physical harm, severe psychological and scholastic adverse consequences. As a result, it would be a threat for the achievement of the Sustainable Development Goals **(***SDGs), especially those related to education and gender equality. Therefore, this research was undertaken to assess the prevalence, outcome and associated factors of GBV among female students of Debre Markos University. Methodologically, we included 766 female students from all departments of the university. GBV was assessed using self-administered questionnaires adapted from WHO multi-country study on women's health and life events. For qualitative data (in depth interviews (IDI) and focused-group discussions (FGD) were carried out. Male students, family members and partners were the main perpetrators. Factors significantly associated with GBV were areas where female students were grown up, academic status, witnessing parental conflict during childhood, non-disclosure of sexual and reproductive issues with families, and family control. Therefore, we recommend that information; education and behavior change activities aimed at preventing GBV and changing social norms on the use of violence must be implemented and strengthened within the campus and the community.*

Background

Violence against women (VAW) is any act of gender based violence (GBV) that results in, or is likely to result in physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary

Key words: female students, gender-based violence, mixed methods study

[1]Department of Public Health, College of Health Sciences, Wollega University, Ethiopia.E-mail: melesegirmaye@gmail.com [2]School of Public Health, The University of Queensland, Australia Email:amanuel.abajobir@uq.net.au[3]College of Health Sciences, Debre Markos University, Ethiopia Email: selaminana@gmail.com Corresponding author: melesegirmaye@gmail.com [1]Department of Public Health, College of Medical and Health Sciences, Wollega University, Ethiopia.

deprivation of liberty, whether occurring in pubic or in private life. Since women are disproportionately affected than men (95% vs. 5%), GBV is often used interchangeably with VAW (1-3).

The term sexual and gender based violence (SGBV), in its widest sense, refers to the physical, emotional or sexual abuse of a survivor. Sexual and gender based violence, in its various forms, is endemic in communities around the world, cutting across class, race, age, religion and national boundaries (4).

Globally, GBV among girls is the most pervasive and socially tolerated of human rights violations but least recognized human rights abuse (5). The World Bank has recognized GBV as a heavy health burden for women aged 15-44 years similar to the risks posed by human immune deficiency virus (HIV), tuberculosis (TB), childhood infection, cancer and heart diseases. The Fourth World Conference on Women held in 1995 in Beijing adopted a platform for action, declaring, "VAW is an obstacle to the achievement of equality, development and peace" (6).

Higher education in Africa has always had a gendered element. Gender-based violence takes in many forms in the region, including physical, sexual, psychological and economic violence. Epidemiological evidence has shown that violence is a major cause of ill-health among women and girls, as seen through death and disabilities due to injuries and through increased vulnerability to a range of physical and mental health problems (7). Female survivors of sexual violence (SV) not only sustain physical injuries, but also have unintended pregnancies more likely than other women, reproductive tract infections, multiple partners and less likely to use condoms and other contraceptives (8, 9).

During the last decade, VAW and girls have gained international recognition as a grave social and human rights concern affecting virtually all societies and among people of every educational background (10-13).

Violence against women (and girls) is a global problem occurring in every culture and social group in which the female is usually the victim, thereby hindering achievement of the SDGs and other national and international

development goals (6, 14). Gender-based violence is increasingly recognized as a public health problem and a violation of human rights (12, 13, 15).

Moreover, school-related GBV represents a serious obstacle to learning causing physical harm, severe psychological and educational adverse consequences. It poses serious threats and obstacles for the achievement of the SDGs, especially those related to education and gender equality (10).

Cognizant to its short long-term consequences, many stakeholders recognize the importance of GBV prevention in higher learning institutions and are beginning to design programs that address its root causes. Yet program development in the region is still quite young (16).Thus, this research was aimed at investigating the extent, patterns, associated factors and outcomes of the different forms of GBV in a sample of female students at DMU, Northwest Ethiopia.

Methods

Study Design and Area

An institution-based cross-sectional study was conducted from 15th – 30th June 2016 among regular female students of DMU. The study employed both quantitative and qualitative (in depth interviews (IDI) and focused-group discussions (FGD) methods. The IDI was chosen to discuss sensitive personal experiences while FGD was conducted to explore the experiences and outlooks of different university communities toward GBV. Debre Markos University, being one of the recently established public higher institutions, started its function in 2006/2007 with one college and eight departments. The university is located 300 km/s northwest of Addis Ababa. The university now has six colleges and one school. There are a total of 9310 regular students of which 2563 (27.5%) were female students.

Study Population and Sampling

Regular female students from all colleges and their respective departments of the DMU who were present during the time of data collection were included. The sample size was determined using a single population proportion formula considering the following assumptions: margin error of 5%, the design effect of 2, non-response rate of 10%, the confidence level of 95%, and proportion for sexual violence of 46% (17). Accordingly, the total sample size was 841 regular female students of DMU.

For the quantitative study, a multi-stage cluster sampling technique was employed for the selection of the sampling units from each college and school. The sample size for respective departments was then determined by proportional allocation to the size of the female students at each department. Systematic sampling technique was applied to select the students from each department. Based on students' records, the first student was determined using simple random sampling method for the interview. The next student was identified systematically.

For the qualitative study, participants (who were not included in the quantitative study) were purposively selected for IDI and FGD for the in depth exploration of GBV pattern including their experiences, feelings and perceptions. The IDI and FGD were organized for different students representing each college/school and other members of the university's community (university police and staffs of students' affairs directorates).

Data Collection Procedures

For the quantitative study, self-administered anonymous questionnaire was developed in English by adapting pertinent variables and terminologies of the different forms of sexual and physical violence from the WHO Multi-Country Study on Women's Health and Life Events (2, 18). The questionnaire was designed to include socio-demographic characteristics, family history, history of substances use, and sexual history. Finally, violence experiences (physical, sexual and psychological), their frequencies experienced before and after joining the university, and in the current academic year. Short and long-term consequences of the various forms of GBV were also included. Sensitive questions such as substance use, sexual history and violence experiences were placed later in order to reduce some offensive reactions and hence minimize non-response rates. It was then translated into Amharic. Pre-test was conducted on 10% of the study participants in Debre Markos Technical and Vocational Education and Training College students and modifications were made based on the feedback. A total of six qualified and trained data collectors and three supervisors were deployed.

For the qualitative study, a semi-structured interview and discussion guide was prepared portraying probing questions or opinions towards the beliefs, attitudes and experiences of GBV. The data collection was conducted with a

moderator assisted by a note-taker and it was tape-recorded. Seven IDIs and two FGDs were undertaken to get insight into issues that could not be addressed by the quantitative survey. The interview was held in areas convenient to the participants. Open-ended questions were used to guide the interviews and discussions. The interviews and discussions were made by an anthropologist and were assisted by a rapporteur after consent was obtained from the participants. The interviews and discussions were facilitated by the principal investigators. Responses were transcribed and translated into English. Themes and categories were used to analyze the IDI and FGD data. Most pertinent findings were incorporated in the final study report.

Data Processing and Analysis

Quantitative Data

Data were entered into Epi Info version 7 statistical software and exported to SPSS version 21 for analysis. To determine the associations between the selected independent factors and GBV, bivariate and multivariable logistic regression analyses were employed. Variables which were significant at a P value of less than 0.05 in the final multivariate logistic regression model were retained as independent predictors of GBV.

Qualitative Data:

The tape-recorded data were transcribed into Amharic and arranged with the written notes taken at the time of discussion. The information was translated into English. Thematic or content analysis was employed to describe the exploratory ideas obtained from the IDI and FGD and to reduce the information into manageable chunks or themes. Finally, it was incorporated with the quantitative findings in order to provide comprehensive and complete ideas about experiences, feelings and/or attitudes of the students and others towards GBV as to why and how GBV occurred among female students of the University.

Operational Definitions

Completed Rape: is any non-consensual penetration of the vagina, penetration obtained by physical (body) harm, by threatening or deception or when the victim is incapable of giving consent.

Attempted Rape: is a trial to have sexual intercourse without consent by physical (body) harm, by threatening or deception or when the victim is incapable of giving consent but without actual penetration of the vagina.

Sexual Violence: is an unwanted sexual behavior and act including physical contacts, rapes, verbal comments, jocks, questions and suggestions that are intentionally done on women or girls.

Physical Violence: is any form of violent act which can result in physical harm including mild form (slapping and punching) or sever form (kicking/drugging, beating/hitting with any object, burning/chocking, and threatening using a knife or a gun, etc.) against women or girls (2).

Shisha: is a tobacco pipe with a long and flexible tube by which the smoke is drawn through a jar of water and thus cooled.

Results

Socio-Demographic Characteristics

Of the total, 841 female students approached, 766 volunteered and responded to the interview yielding a response rate of 91%. Majority of the respondents (77.7%) were between 20-24 years with mean age of 20.65 (±1.567). Four hundred sixty six (60.8 %) were grown-up in rural areas and 757 (98.9%) of the respondents were living in campus during the study period. About 82% of respondents scored GPA of 2 to 3.2, while the 2.7% scored a very great distinction score (3.75-4.0) during last semester. According to their year of study, 36.8%, 32.8%, 18.4%, 7.2% and 4.8% of the students were 1st, 2nd, 3rd, 4th and 5th year, respectively (Table-1).

Table 1:- Socio demographic characteristics of the respondents, DMU female students (2016)

Variables	**Variables**	**Frequency (n=766)**	**%**
Religion	Orthodox	699	91.3
	Catholic	10	1.3
	Protestant	30	3.9
	Muslim	22	2.9
	Other	5	.7
Residence Before	Amhara	619	80.8
	Tigray	38	5.0
Joining DMU	AA	55	7.2
	Oromia	23	3.0
	SNNPR	23	3.0
	Other	8	1.0
Variables	**Variables**	**Frequency (n=766)**	**%**
Last Semester Result 2.71 (+/-0.54)	2.0-3.25 (promoted)	630	82.2

Variables	Variables	Frequency (n=766)	%
Last Semester Result 2.71 (+/-0.54)	3.25-3.5 (distinction)	85	3.9
	3.5-3.75 (great distinction)	30	11.1
	3.75-4.0 (very great distinction)	21	2.7
Self-categorized result	Good	287	37.5
	Average	422	55.1
	Not good	57	7.4
Relationship status	Currently married	74	9.7
	Boyfriend	168	21.9
	Not at all	524	68.4
Residence of husband/boyfriend (n=242)	In-campus	83	34.2
	Out-of-campus	159	65.8
Husband/boyfriend educational status (n=242)	no/illiterate	8	3.3
	Grade 1-8	10	4.1
	Grade 9-12	31	13.0
	>12	190	78.1
	IDK	3	1.2
Occupation of husband/friend (n=242)	Student	98	41.0
	civil servant/teacher	52	21.3
	other employee	83	34.0
	Jobless	9	3.7

Family and Substance Use History

One hundred forty nine (19.5%) students were witnessed by parental conflict during their childhood. Of 766 students, 401 (52.3%) and 493 (64.4%) had father and mother with no formal education, respectively (Table-2).

Table 2: Family (Parental) Characteristics of the Respondents, DMU Female Students (2016)

Variables		Frequency (n=766)	%
Parental status	living together	615	80.3
	Divorced	48	6.3
	Father not alive	70	9.1
	Mother not alive	21	2.7
	Both not alive	12	1.6
Fathers' educational status	No formal education	401	52.3
	Grade 1-8	172	22.5
	Grade 9-12	49	6.4
	>12	114	14.9
	I Don't Know	30	3.9

Mothers' educational status	No formal education	493	64.4
	Grade 1-8	137	17.9
	Grade 9-12	71	9.3
	>12	57	7.4
	I Don't Know	8	1.0
Birth order	1st	159	20.8
	2nd	149	19.5
	3rd	153	20.0
	4th	123	16.1
	5th	87	11.4
	>/=6th	95	12.4
Enough money verses need	No	337	44.0
	Yes	429	56.0
Family income	Good	303	39.6
	Medium	419	54.7
	Bad	44	5.7
Family control	Tight	401	52.3
	Medium	305	39.8
	Free	60	7.8
Mother-father conflict Childhood	No	617	80.5
	Yes	149	19.5

Out of the 766 students, 41 (5.4%) ever chewed chat, 34 (4.3%) smoked cigarettes and 206 (26.9%) drank alcohol of whom 79 (38.3%) were intoxicated at least once in their life time. From 79 students ever intoxicated, 34 (43%) were intoxicated during campus life and 28 (82.8%) of them intoxicated in this academic year. Nearly 2 % developed alcohol addiction (Table 3).

Table 3:- Substance Use History of the Respondents, DMU, Female Students (2016)

Variables		**Frequency**	**%**
Ever chew chat	No	725	94.6
	Yes	41	5.4
Frequency of chewing (n=41)	Daily	4	9.8
	1-2 per week	15	36.6
	1-3 per month	4	9.8
	<1 per month	18	43.9
Ever smoke	No	732	95.7
	Yes	34	4.3
Frequency of smoking (34)	Daily	8	23.5
	1-2 per week	4	11.8
	1-3 per month	5	14.7
	<1 per month	17	50.0

Variables		Frequency	%
Ever drunk	No	560	73.1
	Yes	206	26.9
Frequency of drinking (206)	Daily	5	2.4
	1-2 per week	27	13.1
	1-3 per month	20	9.7
	<1 per month	154	74.8
Ever intoxicated (206)	No	127	61.7
	Yes	79	38.3
Intoxicated in campus (79)	No	45	57
	Yes	34	43
Intoxicated this year	No	6	17.6
	Yes	28	82.4
Have currently intoxicated friend	No	720	94.0
	Yes	46	6.0
Ever used drugs	No	738	96.3
	Yes	28	3.7
Frequency of drug use (n=28	Daily	3	10.7
	1-2 per week	5	17.9
	1-3 per month	5	17.9
	<1 per month	15	53.6

Prevalence and Outcome of Gender Based Violence

Out of 766 respondents, 276 had experienced GBV (at least one type of violence) once in life time constituting life time prevalence of 36%. Sexual and physical violence among female students were assessed before and after joining the university including the current study year.

Sexual Violence

Of 766 students, 145 (18.9%) were sexually abused in life time. As shown in Table 4, 8.74% female students faced violent sexual acts including unwelcomed touch and sexual jock against their will in-campus, and 7.44% were in the current academic year. Forty eight (6.26%), and 80 (10.4%) experienced sexual violence before and after joining the campus, respectively. Eighty-eight (11.48%) female students escaped from attempted rape. Among 145 students who experienced SV, 64 (8.3%) had been raped and 24 (3.13%) of whom were in the study year, 2016. When we see the frequency of rape, 40 (62.5%) were raped once, 14 (21.9%) two times, 4 (6.3%) three times and 6 (9.4%) of them were raped more than 4 times. Among rape victims, 37.5% were raped by boyfriend or husband, 23.4% by family member or relative, 14% by students, 4.6 % by guest and 9.3% by teachers. The reported physical effects of being raped were vaginal discharge

(14.1%), swelling 6.3%, ulceration 20.3% & other physical effect (59.4%). Sex addiction (4.7%) and looking for many sex partners (7.8%) were also reported.

Physical Violence

Of those physically violated, 11.9% were slapped, 8.4% were choked or burnt purposefully and 7.3% of participants were threatened by a knife or other weapon in campus (Table-4).

Table-4: Sexual violence and physical violence, DMU female students (2016)

Type of GBV	**Before campus**		**In-campus**		**This year**	
Sexual Violence	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Sexual act including jokes, touch to reproductive organ against your will	92 (12.01%)	674 (87.98%)	67 (8.74%)	699 (91.25%)	57 (7.44%)	709 (92.55%)
Escape from attempt rape	48 (6.26%)	718 (93.73%)	80 (10.44%)	686 (89.55%)	88 (11.48%)	678 (88.51%)
Rape	40 (5.22%)	726 (94.7%)	24 (3.13%)	742 (96.86%)	24 (3.13%)	742 (96.86%)
Physical violence	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Slapped or threw something at you that could hurt you?	114 (14.9%)	652 (85.1%)	86 (11.2%)	680 (88.8%)	87 (11.4%)	679 (88.6%)
Pushed or shoved	181 (23.6%)	585 (76.4%)	124 (16.2%)	642 (83.8%)	116 (15.1%)	650 (84.9%)
Hit you with fist or with something else	83 (10.8%)	683 (89.2%)	63 (8.2%)	703 (91.8%)	66 (8.6%)	700 (91.4%)
Kicked, dragged or beat up	113 (14.8%)	653 (85.2%)	75 (9.8%)	691 (90.2%)	72 (9.4%)	694 (90.6%)
Choked or burnt on purpose?	88 (11.48%)	678 (88.51%)	67 (8.74%)	699 (91.25%)	64 (8.4%)	702 (91.6%)
Threatened with a gun, knife or other weapon	76 (9.9%)	690 (90.1%)	56 (7.3%)	710 (92.7%)	56 (7.3%)	710 (92.7%)

The perceived psychological effects reported by victims were self-blame (18.8%), fear (15.6%), hopelessness (15.6%), depression (12.5%), suicide attempt and ideation (6.3%) and other effects (31.3%). The perceived social outcomes were low school performance, family (6.3%) and friend (7.8%) neglect and other outcomes (45.3%). The perceived consequences of overall GBV reported by victim students were mistrust of other people (27%), low school performance (13.7%), school dropout (2%), temporary physical harm (8.2%) and permanent disability (1.6%).

Table-5 Perceived consequences of rape, DMU female students (2016)

Variables		**Frequency**	**%**
Physical effect (64)	Vaginal discharge	9	14.1
	Swelling	4	6.3
	ulceration	13	20.3
	Other	38	59.4
Psychological and behavioral Effect	self-blame	12	18.8
	Fear	10	15.6
	hopelessness	10	15.6
	depression	8	12.5
	suicide attempt	1	1.6
	suicide ideation	3	4.7
	Other	20	31.3
Effect of rape on education	low school result	16	25
	school drop out	1	1.6
	family neglect	4	6.3
	friend neglect	5	7.8
	alcohol addiction	1	1.6
	sex addiction	3	4.7
	looking for many for sex	5	7.8
	Others	29	45.3

As shown in figure 1, the main perpetrators of GBV were family and male students which accounted for 39% and 26%, respectively (Figure-1).

14 out of 64 (21.9 %) of victim students told the event to their family and 7 (10.9%) avail to police. Majority of students (81.9%) did not appeal to any one because they feared their family member, perpetrator and neighbors and 9.1% of them didn't tell to anyone because they did not know what to do at that time.

Factors Associated with GBV

From the variables entered multivariate regression: area grown, academic status, family control before campus, mother-father conflict during childhood and non-disclosure about RH issues with family were significantly associated with GBV. When compared students grew in urban area with those students grew in rural area, students who grew in urban area were less likely to experience GBV (AOR = 0.65; 95%CI (0.34-0.87)). Female students whose academic result was less than 2.75 had 2.72 times greater risk of GBV than those who scored above the cut off score. When compared students who come from tight family control with those who had medium family control, students who come from tight family were three times more likely to experience GBV with (AOR=3.45; 95%CI (1.99-5.76).

Participants who witnessed parental conflict during childhood had increased risk of GBV. Those who did not freely discuss about RH issues with family members were more than four times more likely to suffer from GBV [AOR=4.78; 95%CI: (2.87-7.112)]

Table-6 Factors Associated with GBV, DMU Female Students (2016)

Variables	GB	COR	AOR	P-value
Urban Area Grown	yes	1	1	
Rural Area Grown		0.49 (0.25-0.96)	0.65 (0.34-0.87)	0.036
Last Semester Result <2.75	Yes	2.91 (1.24-5.93)	2.72 (1.13-4.82)	0.031
Last Semester Result >/=2.75		1	1	
Tight Family control	Yes		1	
Medium Family control		2.39 (1.17-4.89)	3.45 (1.99-5.76)	0.017
Free Family control		1.46 (0.49-4.36)	1.68 (0.31-7.54)	0.494
Mother-Father Conflict childhood	No	0.39 (0.17-0.89)	0.65 (0.32-0.97)	0.027
Mother-Father Conflict childhood	Yes	1	1	
Freely Discuss RH With Family	No	1	1	
Freely Discuss RH With Family	Yes	2.25 (1.14-4.43)	4.78 (2.87-7.11)	0.019

According to the FGD discussants, there were many female students who used different types of substances. Both female and male FGD participants explained that it was becoming more common to use different types of substances by female

students of the university. Substances were usually available to students around the campus. But one could not notice this during day time. *"Houses around the campus which we drink tea during day time become hot khat and shisha houses during night time. Therefore, measures should be taken" (3rd year female student).*

FGD participants stated that different female students used to take Khat, alcohol, cigarettes, shisha and hashish in and around the campus. In this regard one student said *"I haven't seen female students smoking cigarettes but usually female students chew khat and sometimes I noticed female students using hashish" (3rd year male student).* Another participant also explained: *"We usually see female students using khat and alcohol. Actually I haven't heard of female students using hashish. But I know they use shisha" (2nd year male student).*

One of the discussants explained that the reason for renting houses outside the campus was to get hidden places for using substances. *"These types of cases (substance abuse) happen in our campus because usually female students rent houses outside the campus for mere purpose of chewing khat and using shisha." (3rd year female student)*

As one of the male respondent explained, travelling on foot was also another problem for female students. He said:

> *One day one female student was coming from the town. In her way to the campus, unknown men came to her and took her mobile phone by force. Then she went to campus without taking her mobile phone. The next day she met them and they agreed to return her mobile and appointed her to meet in unknown place and there they raped her (2nd year male student).*

Lack of active gender clubs and any other similar associations in the campus exposed female students to sexual violence because female students did not get any information and support to protect themselves from sexual violence.

> *In our campus, there is no association in which female students participate. We can't find counseling services when we face some problems. We live in our way as we know. Therefore, we need associations which protect us from being violated. We are facing many problems." (3rd year female student)*

Male participants also supported this idea. *"I think the big thing is that there are no associations or clubs in our campus. Lack of these clubs can expose us to such problems". (3rd year male student)*

Both male and female participants of FGD discussed that lack of water in the campus and lack of fence around the female dormitory which separates female students from male students contributed for occurrence of sexual violence.

> *There is no fence around female's dormitory. Last year, there was a meeting in this campus and I heard this from female students at the meeting. On the other side of female's dormitory, there is no fence. For that reason, men from outside can get into the campus, and usually they threaten and attack female students. And I heard that many female students faced many problems due to lack of fence"* (2nd year and 3rd year male students).

Participants also explained that perpetrators use an economic advantage to violate female students. Female students who were unable to get enough money required for education were vulnerable to violence. *Sometimes students may have sex with unknown men to get money. This happens to students who are economically weak and who are unable to fulfill the requirement of their education (2nd year female* student).

Both groups argued that the occurrence of sexual violence was very common problem that every female student faced. *"Usually we see sexual harassment/ from male students against female students in a way from dormitory to classes, from classes to library and so on" (3rd year male student).*

Participants of FGD supported the idea that substance use made female students to be sexually violated. For this, they put different reasons. Different get-together parties prepared by students were responsible for the occurrence of sexual violence or rape. As there was no entertainment in the campus, students prepared different parties in the town to entertain themselves.

> *Last year, students of our campus had prepared a party in the town. After the party was over, both male and female students spent the night together because they couldn't return back to their campus in the evening" (3rd year male student).*

The other explanation which was exclaimed by participants was that male and female students (whether males are students or not) always take substances like *shisha* outside the campus in the same room. This made sexual violence unavoidable.

> *I believe some substances are responsible for the occurrence of sexual violence against female students, for example, since it is not suitable to use shisha within the campus they take and use it outside the campus together with males. So this makes it suitable for sexual violence (2nd year female student).*

Both male and female FGD participants agreed that many substances decrease the conscious level of the users. This could hurt them in many ways. Substance users could not protect themselves from such attack or they may not know what is happening up on them. This problem happened usually when female students used substances together with males.

> *Since alcohol or other drugs may decrease the conscious level of abuser, it may predispose to sexual violence. One reason for this is that because female student usually use substance together with males. During this time they may spend long time together. The other reason is that the place they use the drugs is usually hidden. Since many substance abusers are males, females consult males when they want to use substances* (3rd year student).

Males usually perceive that when female students take substances (drugs), they have a desire to have sexual intercourse. Therefore, they push them to take substances like Shisha, alcohol, Chat etc. and unless females are voluntary, they force them.

Discussion

Overall GBV (both sexual and physical) in this study is found to be 36%. This figure is lower than most local research findings (3). It is lower than the study conducted around Gondar which explored that GBV was 50% (10) and in Addis Ababa, in which 19.2% women reported lifetime experience of the three types of GBV (15). The variation may be due to the fact that those study included women from all segments and our study focused only on young students. It is also lower than the study conducted in Mekelle, which showed the overall prevalence of GBV in lifetime, found to be 62.1% (17).

This may be due to the difference in the study population where the study in Mekelle included students from 9 private and 3 governmental higher institutions. It was also lower than the case in northern Nigeria University, where 58.8% of the students experienced one or more forms of GBV since joining the University (19). The small sample size, the tool they used, and cultural differences might have accounted for the variations.

However, it was higher than WHO multi-country study on VAW in 10 different countries that reported 15-17% lifetime prevalence of physical or sexual violence (20) and a study conducted in Hawassa University explored 24.4 % (21). The Variation may be due to the fact that the study conducted in Hawassa measured GBV of male students as wrongdoers (21).Sexual violence in this study found to be 18.9 % which was lower than the study in Nekemte, which revealed that nearly 62% of the women experienced at least one incident of SV in their lifetime (22). The deviation might be due to the difference in population in that they included all women other than students, and socio cultural difference. Eight percent of students were raped during life time. This result is consistent with a study conducted among high school female students in Debark, which revealed that prevalence of performed rape was 8.8% (23).

The three main perpetrators of sexual violence were partners (husband or boyfriend), family or other relatives and male students. This is similar with the findings in higher institution in Mekelle town (17), Bahir Dar private college (24), and consistent with research conducted in Nigerian University (19). This indicates that sexual violence was performed by the person who was well known by the victim.

The rates of physical violence were different from findings from Addis Ababa women which was found to be 30%, 17.1%, 4.5% and 1.8%, respectively (15). The difference may be due to difference in age and that it included women from all sectors. This study has assessed factors associated with GBV. Factors which were associated with the occurrence of GBV were: area grown up, academic result, witnessing parental control, type of family control and free discussion about RH issues with family. Our study findings revealed mixed results according to the available literature. This indicates that there is a need for a new research that can better assess important factors using strong study design.

When compared students grew in urban area with those students who grew in rural areas, students grew in urban area had reduced risk of GBV by 0.65. This is against the finding of the study conducted in Bahir Dar private colleges (24) which indicates students grew in urban area have increased risk of GBV by 4 times. This might be because student from rural area were isolated from risky behavior. in and out of campus area. Female students with academic result less than 2.75 GPA had 3 times higher risk of GBV when compared with those who scored above. This was consistent with the findings in Mekelle (17) and with the recent study at Menkorer High school in Debre Markos (15). Even if this research didn't explore whether GBV or academic result came first, those who were good in their academic results might be more assertive and safely negotiated about their RH issues.

Those who did not freely discuss RH issues with family member were 4 times more likely to suffer from GBV. This is similar to the study findings in Bahir Dar private colleges (which indicate those who didn't discuss RH issues with their families had increased the risk of GBV by 4 times). This might be due to lack of social support and experience in how to handle a situation.

When compared students who witnessed parental conflict during their childhood, the risk of GBV with the findings around Gondar (10), Mekelle Town (17) and Hawassa University (21), reveals that witnessing parental conflict during childhood increases the risk of GBV. This means that a girl might have learnt and accepted this abusive role from the environment where she had been grown.

Researches on VAW showed an increased risk of physical or sexual violence among women who were alcohol or drug users (25). In this study statistical association was not found between GBV and any substance, but on focus group discussion almost all students (male & female) marked taking substances especially khat, alcohol, shisha and wrong perception about female students who used drugs were important risk factors for occurrence of GBV in the campus. This is supported by different studies (21, 24, 26, 27).

Lack of active gender club, recreational facilities, sufficient income, fence around the female dormitories, and using sex as a means of income

generating activity were the main factors for the prevalence of GBV among FGD participants.

According to students, low school performance, temporary physical harm, and permanent disability were the outcome of GBV. The perceived physical, psychological, social, and academic outcomes of being raped reported by female victim students were supported by different literatures (17, 24), but none of the participants in this study reported unwanted pregnancy as an outcome of rape.

Moreover, due to the sensitive nature of the issues under scrutiny, dissociative reaction after violence, students did not properly report the effect of rape on their physical, psychological and social outcome

Conclusion

More than a third of female students experienced GVB both in- and out- of campus. The main perpetrators were boyfriends, husbands, family members, and male students. Even though the occurrence of GBV, in this study, was found to be less than it was discussed in many other literatures, it is a serious local and social problem. The factors significantly associated with GBV were: place of grown, academic status, family control and witnessing parent conflict during childhood, and not discussing sexual affaires with family. On IDI and FGD both male and female students strongly agreed that lack of facilities and recreational area in campus, and taking substances (drugs) were the main factors for the occurrence of sexual violence.

Recommendations

Based on the findings of this study, the following specific recommendations are forwarded to different stakeholders.

University

- Both qualitative and quantitative analyses indicated that male students found to be one of the perpetrators of GBV. So it is recommended that universities and colleges should give, targeting girls and boys, effective education or awareness raising program about GBV.
- Gender club must be established and strengthen to educate students and to actively detect GBV cases.
- University administration must actively work to ensure the safety of students and teaching learning environment by eradicating or controlling

houses built around the campus that encourage the habit of taking substances such as shisha, khat etc.

- Supportive programs should be strengthening to prevent, detect and to help students affected by GBV from the immediate physical and psychological sufferings and also to reduce further impact on academic career.

Community

To change the behaviour or the social norm of the community, information and educational activities aimed at preventing GBV must be given, strengthened and implemented across the community.

Acknowledgment

We would like to acknowledge Debre Markos University Gender, Disability and HIV Directorate and DKT-Ethiopia for facilitating and funding the research.

References

1. UN General Assembly. Declaration on the Elimination of Violence against Women. United Nations. Resolution A/RES/48/104 [http://www.un.org/documents/ga/ res/48/a48r104.htm]. United Nations, 1993.
2. Dutton D.G. Patriarchy and wife assault: The ecological fallacy. Violence and Victims. 1994; 9(2):125-40.
3. Central Statistical Agency [Ethiopia] and ICF International. 2017. Ethiopia Demographic and Health Survey 2016. Addis Ababa, Ethiopia and Rockville, Maryland, USA: Central Statistical Agency and ICF International.
4. Council P. Sexual and Gender Based Violence in Africa. Literature Review. 2008. 1-61.
5. Watt C, Catty Z: Violence Against Women: Global Scope and Magnitude. Lancet 2002, 359:1232-1237 [http://www.hawaii.edu/hivandaids/Violence against Women Global Scope and Magnitude.pdf].
6. Saltzman LE and Johnson D. CDC's Family and Intimate Violence Prevention Team: Basing programs in science. Journal of the American Medical Women's Association 1996; 51(3):83-6.

7. Rees S. Silove D., Chey T., et.al. Lifetime Prevalence of Gender-Based Violence in Women and the Relationship with Mental Disorders and Psychosocial Function. JAMA. 2011; 306 (5):513-21.
8. Feminist Africa. Rethinking Universities. African Gender Institute, University of Cape Town, South Africa. 2007, 8: 1726-4596. African Gender Institute, University of Cape Town, South Africa. 2007; 8:1726-4596.
9. USAID/Eastern and Central Africa, UNICEF/East and Southern Africa Regional Office's. Strategic Framework for the Prevention of and Response to Gender-based Violence in Eastern, Southern and Central Africa. 1946-2006.
10. Nelson Mandela, World Report on Violence and Health. Addressing Violence against women within the Education sector. 2002.
11. International Center for Research on Women Gender-based Violence Prevention Network South African Medical Research Council. Strengthening Research and Action on Gender-based Violence in Africa. 2012.
12. National Office for the Prevention of Domestic, Sexual and Gender-Based Violence. National Strategy on Domestic, Sexual and Gender-based Violence 2010-2014. 2010.
13. Ellsberg M and Heise L. Researching Violence Against Women: A Practical Guide for Researchers and Activists. Washington DC, United States: World Health Organization, PATH; 2005.
14. Heyse L, Ellsberg M and Gottemoeller M: Ending Violence against women Baltimore: John's Hopkins University School of Public Health; Population Information Program; 1999, Report No.: Series L, No. 11 [http: //info.k4health. org/pr/111/violence.pdf].
15. Workneh Demissie. Gender Based Violence and the Risk of HIV Infection among Women Attending Antenatal Care Service at HIV Sentinel Surveillance Sites in Addis Ababa. 2007.
16. National Action Plan on Gender-Based Violence (NAP-GBV). Republic of Zambia Gender in Development Division. 2008-2013.
17. Yaynshet G/Yohannes. Prevalence and Factors Related to Gonder Based Violence among Female Students of Higher Learning Institutions in Mekelle Town, Tigray, Northern Ethiopia. 2007.

18. Heise L: Violence against Women: the Hidden Health Burden. World Health Stat Q 1993, 46(1):78-84 [http://www.uneca.org/adfvi/documents/UNFPA-RH-effects-ofGBV.pdf].
19. Zubairu lliyasu, Isa S Abubakar and Mukar H Aliyu, et al. Gender-based Violence in Tertiary Institutions. Prevalence and Correlates of Gender-based Violence among Female University Students in Northern Nigeria. African Journal of Reproductive Health September 2011, 15(3): 111-19.
20. World Health Organization. WHO Multi-Country Study on Women's Health and Domestic Violence against Women: Summary Report Of Initial Results on Prevalence, Health Outcomes And Women's Responses. Geneva, World Health Organization, 2005 [http://www.who.int/gender/violence/whomulticountrystudy/en].
21. Philpart M GM, Gelaye B, Williams MA, Berhane Y. Prevalence and Risk Factors of Gender-Based Violence Committed by Male College Students in Awassa, Ethiopia. . Violence and Victims 2009; 24(1); 24(1):122-36.
22. Sileshi G Abeya, Mesganaw, F. Afework and Alemayehu, W. Yalew. Intimate Partner Violence against Women in Western Ethiopia: Prevalence, Patterns and Associated Factors. BMC Public Health 2011, 11:913 [http://www.biomedcentral.com/1471-2458/11/913].
23. Worku, A. and Addisie M. Sexual Violence among Female High School students in Debark, North West Ethiopia. Department of Community Health, Faculty of Medicine, Addis Ababa University, Ethiopia [Pmid: Pubmed-Indexed For Medline].
24. Shimekaw B, Megabiaw B, Alamrew Z. Prevalence and Associated Factors of Sexual Violence among Private College Female Students in Bahir Dar city, North Western Ethiopia. Health. 2013; 05 (06):1069-75.
25. USAID. Egypt violence against Women Study. Literature Review of Violence against Women. 2009: 1-73.
26. Tegbar Yigzaw, Anwar Yibrie and Yigzaw Kebede. Domestic violence around Gondar in Northwest Ethiopia. Ethiop. J. Health Dev. 2004, 18(3): 133-39.
27. Mullu G. Prevalence of Gender Based Violence and Associated Factors among Female Students of Menkorer High School in Debre Markos Town, Northwest Ethiopia. Science Journal of Public Health. 2015; 3(1):67-74.