



Prevalence of sexual gender based violence and associated risk factors among adolescent girls in Nyagatare District, Rwanda

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Abstract

Approximately 15 million adolescent girls (aged 15 to 19) worldwide have experienced forced sex (forced sexual intercourse or other sexual acts) at some point in their life. Out of these, 9 million adolescent girls were victimized within the past year. In Rwanda, sexual gender based Violence (SGBV) in and around schools exists. Recent statistics from MIGE-PROF point out that around 17 000 young female adolescents aged between 16 and 17 years were impregnated. The aim of this study was to assess the prevalence and associated factors of sexual gender based violence among adolescent girls in Nyagatare district. A cross-sectional survey with quantitative method was employed. A sample of 196 adolescents girls attending schools at Nyagatare District, calculated using Fisher formula were included in this study. Data were collected using questionnaires and analyzed by the use of SPSS version 21. Findings were presented in forms of frequencies and percentages in tables. Factors associated with sexual gender based violence were achieved by means of chi square statistical test for significance for both bivariate and multivariate analysis. The findings of this study revealed that sexual gender based violence occurred among majority of participants (64.3%). It was noted that the vulnerability to sexual gender based violence increases with age. For instance, adolescents in the age group of 17-19 years (OR=44; 95%CI=5.302-365.114; P<0.001) were much more likely to suffer from sexual gender based violence. It was noted that the odd of being a victim of sexual gender based violence was high among Catholic religion (OR=1.79; 95%CI=0.814-3.95, P=0.147). On the other hand, those who do not drink alcohol (OR=0.062; 95%CI=0.025-0.153; P<0.001) were less likely to have sexual gender based violence. It was concluded that the prevalence of sexual gender based violence among adolescence girls was 64.3% which is a bit higher than national level (23.9%). Living alone, educational level, the amount of received money from the family, drinking alcohol, and mother being beaten by father were risk factors associated with sexual gender based violence among adolescent girls in Nyagatare District. It was recommended that the pre-established measure to fight against sexual gender based violence should be strengthened in order to decrease this particular prevalence. The district health officers in partnership with NGOs should approach those adolescent girls living alone for the sake of counseling and helping them accordingly.

Introduction

Approximately 15 million adolescent girls (aged 15 to 19) worldwide have experienced forced sex (forced sexual intercourse or other sexual acts) at some point in their life. Out of these, 9 million adolescent girls were victimized within the past year [1]. In the vast majority of countries, adolescent girls are most at risk of forced sex by a current/former husband, partner or boyfriend. Based on data from 30 countries, only one per cent ever sought professional help [1].

In Africa, although risk factors differ by context, alcohol consumption, poverty and lower levels of education are commonly associated with a higher likelihood of perpetrating or experiencing violence [2]. Still, in West and Central Africa here this harmful practice is most common, over four out of 10 young women were married before their 18th birthday. Child marriage often results in early pregnancy and social isolation, interrupts schooling, limits the girl's opportunities and increases her risk of experiencing domestic violence [3].

In a survey of 3,706 primary schoolchildren from Uganda, 24 per cent of 11 to 14-year-old girls with disabilities reported sexual violence at school, compared to 12% of non-disabled girls [4].

In Rwanda, GBV and sexual violence in and around schools exists [5]; and recent statistics from MIGEPROF point out that around 17 000 young female adolescents aged between 16 and 17 years were impregnated [5]. There has been a gradual increase of sexual gender based violence cases reported since GBV reporting was introduced 5 years ago, however, it appears to have leveled in 2016. This is most likely as a result of increased reporting as more health workers are trained to manage GBV and sexual violence cases [6]. The population is also more aware of the Isange One Stop Centers that have been set up to care for these cases [6].

Recent statistics from *MIGEPROF* point out that around 17 000 young female adolescents aged between 16 and 17 years were impregnated [5].

Despite the existence of Rwanda's political will, institutional policy and legal frameworks to fight against sexual a GBV, the latter is still observed in the country due to the socio-cultural and societal factors including mainly culture and tradition, unequal power relationships between women and men, religious practices and beliefs, economic dependency of women on men and poverty [7, 8]. In terms of sexual and GBV occurrence, the Rwanda DHS (2014-15) revealed that 7.2% women between 15-19 years have begun childbearing. The report produced by the Ministry of Health in 2016 shows that of the total district deliveries, 9% (1140) were young girls between 16-19 years [9].

Gender based violence was found to be perpetrated throughout the whole country with high incidence in Eastern Province where Nyagatare district is located [10]. Adolescents in Eastern Province are about twice as likely to start childbearing earlier than their counterparts [11].

Currently, there is a shortage of studies on prevalence and associated factors of gender based violence among adolescent girls in Rwanda particularly in Nyagatare District. Therefore, the research sought to assess the prevalence and asso-

ciated factors of sexual gender based violence among adolescent girls in Nyagatare District.

Materials and Methods

Study design and setting

Descriptive research design using quantitative approach was utilized. The study was conducted in Nyagatare District located in Eastern Province Rwanda.

Study population and sampling techniques

The population of this study was school going adolescent girls attending schools of Nyagatare District from February 2019 to August 2019. The stratified sampling technique was used to obtain the samples. The choice of this technique is based on the fact that it is more convenient when the population is very large and that it provides greater precision Wolfer (2007). The technique involves dividing the entire population into strata i.e. schools and then applying random sampling methods on each stratum to obtain the final study sample size. For instance, the calculated sample from each and every school (stratum) was selected using simple random sampling techniques.

Sample population

In this study, sample size was calculated using the Fisher's formula as it has been used by Naing *et al.* (2006) stated as:

$$n = \frac{zp(1-p)}{d^2}$$

Z: Standard normal variate at 5% type I error $P < 0.05$, it is 1.96. P: 50 % as no studies showing the prevalence of GBV among adolescents in Rwanda to use as reference. d: absolute error or precision 5%, and N: sample size.

$$n = \frac{1.96 \times 0.5(1 - 0.5)}{(0.05)^2} = 196$$

Data collection method

The close-ended questionnaire was designed to capture adolescents' information regarding prevalence and asso-

ciated factors of sexual GBV. The questionnaires were distributed to the adolescent girls in morning when they were not tired and their level of concentration was high. The researcher verbally explained to the adolescent girls the purpose of the exercise, in order to influence them to take the questionnaires seriously.

Data analysis Procedure

Collected data were organized and analyzed as quantitative. All the data were cleaned, coded and entered in the Statistical Package for Social Sciences (SPSS) for analysis using descriptive statistics to generate frequency tables. Inferential statistics, specifically logistic regression analysis was carried out to determine the direction and strength of association that could exist between prevalence and some variables. Chi-square was used to determine if there is any relationship prevalence and some study variables. Pearson Chi-Square $p < 0.05$ indicated that the relationship is statistically significant while $p > 0.05$ indicated that the relationship was not statistically significant. Results of the analysis were presented in tables.

Results

Socio-demographic characteristics of the adolescents

Table 4.1 indicates that most of participants (62.8%) were aged below 16 years. A minority of them (7.7%) were aged above 19 years. Most of participants (69.4%) were Protestants by religion. In this study all participants (100%) were single. A majority of participants (79.6%) were in secondary school while minority (20.4%) were in primary schools. A majority of participants (74.5%) lives in rural area while a minority of them (25.5%) live in urban area.

Table 1 Socio-demographic characteristics of the respondents

Variables	Category	Frequency	Percent
Age	<16 years	123	62.8
	17-19 years	58	29.6
	>19 years	15	7.7
	Total	196	100.0
Religion	Muslim	5	2.6
	Catholic	55	28.1
	Protestant	136	69.4
	Total	196	100.0
Living with	with parents	133	67.9
	with my boy friend	5	2.6
	with my husband	4	2.0

	with relatives	25	12.8
	Alone	29	14.8
	Total	196	100.0
Marital status	Single	196	100.0
Education level	Primary	40	20.4
	Secondary	156	79.6
	Total	196	100.0
Residence	Rural	146	74.5
	Urban	50	25.5
	Total	196	100.0

Source: Primary data

Table 2 indicates that a majority of participants' fathers (41.3%) have attended secondary school while minority of participants' fathers (9.2%) have attained diploma level and above. When it comes to mother's educational level, a majority of mothers (43.9%) have attained secondary level of study.

It was noted that majority of participants (70.9%) live a family where mother and father live together. Majority of participants (81.1%) reported that their family monthly income is less than 40000 Rwf.

A good number of participants (71.9%) claimed that they do not receive enough money while a minority of them (28.1%) claimed to receive enough money.

Table 4. 2 Family history of the respondents

	Frequency	Percent
Father's educational level		
Illiterate	17	8.7
Primary	81	41.3
Secondary	80	40.8
Diploma and above	18	9.2
Total	196	100.0
Mother's educational level		
Illiterate	25	12.8
Primary	62	31.6
Secondary	86	43.9
Diploma and above	23	11.7
Total	196	100.0
Mother and father live together		
Yes	139	70.9
Divorced	29	14.8
mother only alive	19	9.7
father only alive	9	4.6
Total	196	100.0
Family monthly income		
<40000	159	81.1
40000-80000	34	17.3
>80000	3	1.5

Total	196	100.0
Receiving enough money		
Yes	55	28.1
No	141	71.9
Total	196	100.0
Mother being beaten by father		
Yes	85	43.4
No	111	56.6
Total	196	100.0

Source: Primary data

Prevalence of sexual gender based violence

Table 3 on page 34 indicates that a majority of participants (61.7%) do not have regular boyfriends. A majority of participants (62.2%) has ever had sexual intercourse. A majority of participants (62.8%) faced unwanted sexual act.

A majority of participants (64.3%) had unwanted kissing. A majority of participants (63.8%) faced unwelcome touching of body parts. A majority of participants (60.2%) had forced sex which occurred in the home of perpetrator among most of participants (41.8%), and a most (50.0%) faced perpetrators whose age is older than them

Table 3 Sexual history of the respondents

	Frequency	Percent
Have regular boyfriend currently		
Yes	75	38.3
No	121	61.7
Total	196	100.0
Ever had sexual intercourse		
Yes	122	62.2
No	74	37.8
Total	196	100.0
Condition In which I started sexual intercourse (122)		
in marriage	3	1.5
personal desire	43	21.9
peer pressure	57	29.1
for financial purpose	18	9.2
for passing examination	1	.5
Total	122	62.2
Age at first sexual intercourse (124)		
<17 years	112	57.7
17-19 years	8	4.1
>19 years	2	1.0

Total	122	63.3
Unwanted sexual act		
Yes	123	62.8
No	73	37.2
Total	196	100.0
Forced unwanted kiss		
Yes	126	64.3
No	70	35.7
Total	196	100.0
Unwelcome touching of body parts		
Yes	125	63.8
No	71	36.2
Total	196	100.0
Forced sexual attempt		
Yes	125	63.8
No	71	36.2
Total	196	100.0
Forced sex		
Yes	118	60.2
No	78	39.8
Total	196	100.0
Forced sex made by frightened and degrading		
Yes	89	45.4
No	106	54.1
Total	195	99.5
Place of forced sex		
in my home	38	19.4
in his home	82	41.8
in school	6	3.1
in hotel	1	.5
Total	127	64.8
Times of forced sex encountered (n=126)		
Day	100	51.0
Night	26	13.2
Total	126	64.3
Age of perpetrator (n=126)		
same age	16	8.2
older than me	98	50.0
much older than me	12	6.1
Total	126	64.3
Number of forced sex in life time (n=126)		
one time	16	8.2
two times	65	33.2
three times	30	15.3
four and more times	15	7.7

Total	126	64.3
Number of boyfriend experienced (n=124)		
one time	36	18.4
two times	47	24.0
three times	23	11.7
four and more times	18	9.2
Total	124	63.3

Source: Primary data

Table 4 above indicates that sexual gender based violence occurred among a majority of participants (64.3%). This particular prevalence was computed from various variables including ever had forced sex, unwelcome body touching, unwanted kissing, unwanted sexual act, and ever had sexual intercourse.

Table 4 Prevalence of sexual gender based violence

Sexual GBV		Frequency	Percent
Valid	No	70	35.7
	Yes	126	64.3
Total		196	100.0

Source: Primary data

Factors associated with sexual violence against adolescents

Table 5 above indicates that most participants (58.2%) drink alcohol while minorities of them (41.8%) do not do so. A majority of those who drink alcohol (24.0%) drink occasionally/less than once a month.

As few as 7.1% of participants reported that they abuse drugs. All of them uses drugs occasionally/less than once a month.

Table 5 Adolescent's behavioral characteristics

		Frequency	Percent
Alcohol use			
	Yes	82	41.8
	No	114	58.2
	Total	196	100.0
Frequency of alcohol use (n=82)			
	Once or twice a	31	15.8

weak		
1-3 time a month	4	2.0
Occasionally/less than once a month	47	24.0
Total	82	41.8
Drug abuse		
Yes	14	7.1
No	182	92.9
Total	196	100.0
Frequency of drug abuse (n=14)		
Occasionally/less than once a month	14	100

Source: Primary data

Table 6 above indicates that the vulnerability to sexual gender based violence increases with age. For instance adolescents in the age group of 17-19 years (OR=44; 95%CI=5.302-365.114; P<0.001) were much more likely to suffer from sexual gender based violence than those aged below 16 years (OR=27.00; 95%CI=3.432-212.414; P= 0.000). Since the p value is less than 0.001, the relationship between age and sexual gender based violence is statistically significant at 0.1% level.

It was noted that the odd of being a victim of sexual gender based violence was high among catholic religion (OR=1.79; 95%CI=0.814-3.95, P=0.147) compared to other religions. Since the p value is above 0.05, the relationship between religion and sexual GBV is not statistically significant at 5% level.

The current study revealed that living alone (OR=1.24; 95%CI=0.126-12.337; P=0.852) was much more associated with sexual gender based violence. Since the p value is above 0.05, the relationship between mode of living and sexual GBV is not statistically significant at 5% level.

It was noted that the risk for gender sexual gender based violence increase with educational attainment. For instance, adolescents in secondary schools (OR=73.62; 95CI=16.860-21.514; P<0.001) were more likely to have sexual gender based violence than those in primary. Since the p value is less than 0.001, the relationship between educational level and sexual gender based violence is statistically significant at 0.1% level.

When it comes to residence, those living in urban (OR=0.19; 95CI=0.100-0.393; P<0.001) were less likely to have sexual gender based violence. Since the p value is less than 0.001, the relationship between residence and

sexual gender based violence is statistically significant at 0.1% level.

Table 6 Relationship between socio-demographic characteristics and sexual gender based violence

Variables	Indicators	Status of Sexual GBV		COR(95%CI)	P-Value
		No n(%)	Yes n(%)		
Age	<16 years	42(34.1)	81(65.9)	27.00(3.432-212.414)	0.002
	17-19 years	14(24.1)	44(75.9)	44.00(5.302-365.114)	<0.001
	>19 years	14(93.3)	1(6.7)	Ref	
Religion	Muslim	2(40.0)	3(60.0)	Ref	
	Catholic	35(63.6)	20(36.4)	1.79(.814-3.95)	0.147
	Protestant	33(24.3)	103(75.7)	1.31(.575-2.992)	0.519
Living with	with parents	39(29.3)	94(70.7)	Ref	
	with my boy friend	2(40.0)	3(60.0)	0.33(0.148-0.767)	0.009
	with my husband	3(75.0)	1(25.0)	0.56(0.239-1.341)	0.196
	with relatives	10(40.0)	15(60.0)	0.13(0.148-0.767)	0.091
Educational level	Alone	16(55.2)	13(44.8)	1.24(0.126-12.337)	0.852
	Primary	38(95.0)	2(5.0)	Ref	
	Secondary	32(20.5)	124(79.5)	73.62(16.860-21.514)	<0.001
Residence	Rural	38(26.1)	108(73.9)	Ref	
	Urban	32(64.0)	18(36.0)	0.19(0.100-0.393)	<0.001

COR: crude odd ratio, 95% CI: 95% confidence interval

Table 7 indicates that those who were not receiving enough money (OR=4.216; 95% CI=2.185-8.134; P<0.001) are more likely to have sexual gender based violence. Since the p value is less than 0.001, the relationship between receiving enough money and sexual gender based violence is statistically significant at 0.1% level.

Adolescents whose mothers are not being beaten by fathers (OR=0.024; 95% CI=0.007-0.081; P<0.001) were less likely to have sexual gender based violence. Since the p value is less than 0.001, the relationship between mother being beaten by father and sexual gender based violence is statistically significant at 0.1% level.

On the other hand, those who do not drink alcohol (OR=0.062; 95% CI=0.025-0.153;) were less likely to have sexual gender based violence. Since the p value is less than 0.001, the relationship between drinking alcohol and sexual gender based violence is statistically significant at 0.1% level.

Table 7 Relationship of sexual GBV and other factors

Variables	Indicators	Status of Sexual GBV		COR(95%CI)	P-Value
		No n(%)	Yes n(%)		
Receiving enough money	Yes	33(60.0)	22(40.0)	Ref	<0.001
	No	37(26.2)	104(73.8)	4.216(2.185-8.134)	
Mother being beaten by father	Yes	3(3.5)	82(96.5)	Ref	<0.001
	No	67(60.4)	44(39.6)	0.024(0.007-0.081)	
Drink alcohol	Yes	6(7.3)	76(92.7)	Ref	<0.001
	No	64(56.1)	50(43.9)	0.062(0.025-0.153)	

COR: crude odd ratio, 95%CI: 95% confidence interval

4.3 Discussion of findings

The finding of this study indicate that sexual gender based violence occurred among most participants (64.3%). This a bit higher than the prevalence of sexual gender based violence found in a cross-sectional study on prevalence and associated risk factors of violence against conflict-affected female adolescents: a multi-country where 26.67% of participants experienced sexual gender based violence in form of unwanted sexual touching, forced sex, and/or sexual coercion [12]. It is also much higher than that reported in a study on prevalence and risk factors for sexual assault among class 6 female students in unplanned settlements of Nairobi, Kenya where 11.0% (n = 4125) of girls reported sexual assault in the last twelve months [13].

It was noted that a majority of participants in this study (64.3%) had experienced unwanted kissing. This comparably higher than the magnitude found in a cross-sectional study on sexual violence and girls' performance in Rwandan schools: A case study of some 12 year basic education schools in Muhanga District where only 18.4% of urban adolescent girls experienced forced kissing [5].

It was noted that the risk for gender sexual gender based violence increase with educational attainment. For instance, adolescents in secondary schools (OR=73.62; 95CI=16.860-21.514; P<0.001) were more likely to have sexual gender based violence than those in primary. In addition a study in Brazil indicates that the prevalence of sexual gender based violence against girl was 27.5%. The associated factors for sexual violence were low level

of schooling (OR=2.34), a history of domestic violence (OR=2.21) [14].

The current study revealed that those who do not drink alcohol (OR=0.062; 95%CI=0.025-0.153) were less likely to have sexual gender based violence. When compared with other past study on sexual violence, a study conducted in USA revealed that students used addictive drugs like alcohol (18%) as very important contributing factors for sexual violence's [15]. This is also supported by a study conducted on Prevalence and Associated Factors of Sexual Violence among High School Female Students in Dilla Town, Gedeo Zone SNNPR, Ethiopia which noted that the likelihood of experiencing sexual violence in their life time was higher among those students who had a habit of taking alcohol than those who didn't have a habit of alcohol intake, (OR=1.579, 95% CI; 0.450, 5.541) [16].

It was found that those adolescents girls who were not receiving enough money (OR=4.216; 95%CI=2.185-8.134; P<0.001) are more likely to have sexual gender based violence. This is in line with the study by Tarekegn *et al*, [16] which revealed that from the respondents who had not getting enough amount of pocket money was more exposed than those who had getting enough amount of money (AOR= 1.303, 95% CI, 0.430, 3.953).

Conclusions and Recommendation

The current study concluded that the prevalence of sexual gender based violence was 64.3% which is a bit higher than national level (23.9%). Living alone, educational level, the amount of received money, drinking alcohol, and whether mother being beaten by father were risk factors associated with sexual gender based violence among adolescent girls in Nyagatare District. It was recommended that the pre-established measure to fight against sexual gender based violence should be strengthened in order to decrease this particular prevalence. The district health officers in partnership with NGOs should approach those adolescent girls living alone for the sake of counseling and helping them accordingly.

Limitation

During data collection by the researcher, the questionnaires were self-reported. Self-reporting can result in the unreliability of data as some respondents might exaggerate their responses, while others might underreport the

data. Regardless of the many districts in Rwanda, the study collected data from Nyagatare District only as such the findings can only be generalized within the population of adolescents in Nyagatare District.

Competing Interests

The authors declare that they have no competing interests.

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