













Total	122	63.3
<b>Unwanted sexual act</b>		
Yes	123	62.8
No	73	37.2
Total	196	100.0
<b>Forced unwanted kiss</b>		
Yes	126	64.3
No	70	35.7
Total	196	100.0
<b>Unwelcome touching of body parts</b>		
Yes	125	63.8
No	71	36.2
Total	196	100.0
<b>Forced sexual attempt</b>		
Yes	125	63.8
No	71	36.2
Total	196	100.0
<b>Forced sex</b>		
Yes	118	60.2
No	78	39.8
Total	196	100.0
<b>Forced sex made by frightened and degrading</b>		
Yes	89	45.4
No	106	54.1
Total	195	99.5
<b>Place of forced sex</b>		
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
<b>Times of forced sex encountered (n=126)</b>		
Day	100	51.0
Night	26	13.2
Total	126	64.3
<b>Age of perpetrator (n=126)</b>		
same age	16	8.2
older than me	98	50.0
much older than me	12	6.1
Total	126	64.3
<b>Number of forced sex in life time (n=126)</b>		
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
<b>Number of boyfriend experienced (n=124)</b>		
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
<b>Total</b>		<b>196</b>	<b>100.0</b>

**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
<b>Alcohol use</b>			
	Yes	82	41.8
	No	114	58.2
	Total	196	100.0
<b>Frequency of alcohol use (n=82)</b>			
	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
<b>Drug abuse</b>		
Yes	14	7.1
No	182	92.9
Total	196	100.0
<b>Frequency of drug abuse (n=14)</b>		
Occasionally/less than once a month	14	100

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**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)	<b>&lt;0.001</b>
	>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)	<b>&lt;0.001</b>
Residence	Rural	38(26.1)	108(73.9)	Ref	
	Urban	32(64.0)	18(36.0)	0.19(0.100-0.393)	<b>&lt;0.001</b>

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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