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Bullying and associated risk factors among adolescents in a secondary school in Lobatse, Botswana

Authors:
Taboka Maphorisa[1]
Hlanganiso Roy[1]
Philip Opondo[1]
Anthony A. Olashore[1]

Affiliations:
[1]Department of Psychiatry, Faculty of Medicine, University of Botswana, Gaborone, Botswana

Corresponding author:
Taboka Maphorisa,
tabokamaphorisa@gmail.com

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Background: The prevalence of bullying globally is concerning. There is a lack of data to inform policies against bullying in Botswana.

Aim: The study aimed to determine the prevalence and associated risk factors of bullying among students in a senior secondary school.

Setting: The study was conducted in Lobatse, Botswana.

Methods: A cross-sectional study was done among 372 Lobatse Senior Secondary School students. Data were collected using the Illinois Bullying Scale, Cyberbullying, Strengths and Difficulties, Car, Relax, Alone, Forget Friends, Trouble (CRAFFT) and the Oslo Social Support Scale. Data were analysed using IBM SPSS Statistics version 28.

Results: Overall prevalence of bullying was 23.2%, 33.1% and 42.5% for perpetration, victimisation and cyberbullying, respectively. Being male (B = –0.143, p = 0.004), having poor social support (B = –0.193, p = < 0.001), having a possible substance use problem (B = 0.157, p = 0.002) and having conduct disorder (B = 0.276, p = < 0.001) were found to be significantly associated with bullying perpetration. Having a conduct problem was the only factor associated with bullying victimisation (B = 0.0276, p < 0.001). Factors significantly associated with cyberbullying were being a day scholar (B = –0.117, p = 0.021), having a substance use problem (B = 0.136, p = 0.008) and possible conduct disorder (B = 0.177, p < 0.001).

Conclusion: Bullying is on the rise in Botswana secondary schools, highlighting the need for effective prevention strategies.

Contribution: The study offers insights into bullying patterns among secondary school students and identifies areas to be targeted for prevention.

Keywords: bullying perpetration; bullying victimisation; cyberbullying; secondary school.

Introduction

Bullying in adolescents is a global challenge that has been observed over time.[1] Its presence among high school students in Botswana and other parts of the world is evident through mainstream media and social media reports, with growing parental concerns about their children's safety in schools.[2,3] Bullying in adolescents violates two essential elements of the child's rights: the right to quality education and good health.[4] Bullying is a significant problem with physical and psychological health effects on both the victims and the perpetrators.[5] It has multiple psychosocial consequences, such as suicidal ideation, anxiety and depression.[6,7]

Bullying is intentional, repeated, harmful actions by one or more people directed toward another person without clear provocation from the target.[8] Therefore, it can be described as aggressive behaviour carried out more than once in an act performed to exert power and strength on a perceived weak target. It takes multiple different forms. Direct bullying is customarily overt, and the victim knows he or she is being bullied. Indirect bullying or relational bullying refers to psychological and emotional acts such as social exclusion, giving hurtful nicknames, making humiliating remarks, gossiping and spreading rumours. Cyberbullying has become a new form of relational bullying with the emerging technology and its increasing use.[9,10] Cyberbullying is commonly seen among secondary school students, and most incidents are unreported; nevertheless, it has serious psychological and physical consequences on the learners and their academic performance.[9,10]

An American study among 15 686 students found that 44.4% bullied others and 41.1% were bullied last term.[11] A review estimating bullying victimisation and perpetration among children and adolescents in Australia reported estimated lifetime rates of 25% and 11.61%, respectively. Cyberbullying was found to be less prevalent, with estimates of 7.02% and 3.45% for victimisation and perpetration, respectively.[12] In Nigeria, bullying perpetration was reported as 16.3%,[13] while in Tunisia, bullying perpetration and victimisation were 16.0% and 11.3%, respectively.[14] In South Africa, an estimated 9.57% were involved in bullying perpetration, while 21.96% reported being victims of bullying.[15]

In Botswana, studies on bullying are scarce, with the only quantitative study on victimisation prevalence over 15 years ago reporting 53.1%.[16] However, a qualitative study conducted 13 years ago also reported that participants acknowledged the presence of some form of bullying in the schools, with victims reporting negative consequences, like poor academic performance.[17] Despite this, many bullying events go unreported, and schools lack data on incident numbers and management.[17,18] More importantly, the rise of information technology and rapid growth over the past decade[19] – driven by higher mobile penetration and affordable data packages – may lead to a shift in the types or methods of bullying in Botswana. Although it is reasonable to assume that cyberbullying might have increased as a result, there is currently no data to confirm this.

Several factors have been identified in many studies outside Botswana,[2,20,21,22] but the extent to which this applies to our setting is unknown. A survey from eight African countries posits that a strong association exists between bullying and both current cigarette use and involvement in physical fights occurring within a year before the assessment.[23] These findings are consistent with a Nigerian study, which associated bullying perpetration with male gender, hailing from a polygamous family with low parental religiosity, drug use, poor academic performance and having a negative relationship with teachers.[13] Bullying may originate from previous victimisation, as individuals subjected to bullying might internalise their anger and subsequently intimidate others.[21] The extent to which this applies within our context in Botswana remains uncertain, particularly given that historically, bullying was not regarded as an issue but rather as a typical aspect of maturation or a 'rite of passage', with boys exhibiting aggressive behaviour previously being considered to be courageous.[17]

Bullying can cause psychological issues like depression and suicidal behaviour,[6] and may be linked to increased psychiatric disorders in Botswana. As such, it is crucial to comprehend the underlying causes of bullying and take necessary preventative measures. Hence, our objective was to ascertain the prevalence and associated risk factors of bullying among senior school students in Lobatse, Botswana. We believe this will sensitise stakeholders and help educational institutions create targeted programmes to prevent such harmful behaviour.

Research methods and design

Study design, setting and population

The study was cross-sectional research conducted in Lobatse Senior Secondary School, a public institution located in Lobatse town, in the southeastern district of Botswana. The school offers both day and boarding facilities. At the time of data collection, it had an enrolment of 1485 students, out of which 151 were boarders. The presence of students from both day and boarding facilities provided a convenient opportunity for comparison between the boarders and non-boarders within the same school.

The study population consisted of students enrolled in Lobatse Senior Secondary School, in forms four or five at the time of data collection, who were literate in the local languages, Setswana and English. The study excluded those whose parents did not grant consent for participation.

Sampling and procedure

The sample size was calculated using Cochran's formula (1977), based on the prevalence of bullying among adolescents in Nigeria found in a previous study (0.16) and a desired level of precision of 0.05. Accordingly, the sample size was determined to be 201, with an additional 20% added to account for possible non-response, resulting in 241 participants.

A multistage sampling technique was used to enrol study participants. The students were divided into two groups according to their grades Form 4 and Form 5. Classes were randomly selected from both arms. Students were then randomly selected from the selected classes. This method allowed for any student to be selected, thus minimising participant bias.

Data were collected from August 2023 to September 2023. The principal investigator visited randomly selected classes before their scheduled lunch breaks. During these visits, the students were provided with a comprehensive explanation of the objectives and rationale of the study. The students were given letters containing further details about the study, which they were encouraged to share with their parents. The students were allowed to ask any questions they might have had, and consent forms were handed out for their parents or guardians to sign. One week later, the principal investigator returned to the classes, and the students who had been randomly selected and whose parents or guardians had signed consent forms were given the necessary instructions to complete the self-administered questionnaires.

Sociodemographic questionnaire

The questionnaire was designed by the investigator. It includes specificities on the demographics of the respondents;

for example, age, gender and level of study. It also includes questions to assess family relations, socioeconomic status and students' academic performance, which may influence the presence or absence of bullying.

Illinois Bullying Scale

It is an 18-item scale divided into three subscales: bully, victim and fight; this was used to assess bullying victimisation and perpetration. The tool uses a five-point Likert scale to grade participant responses. Respondents grade how often they bullied or were bullied in the last 30 days. Bullying scores: zero is none; less than nine, mild; 10–18, moderate; 19–36, severe. Victimisation scores: zero is none; less than four, mild; 5–8, moderate; 9–16, severe.[24] Our outcome was said to be present if the individual scored more than the minimum required for moderate classification for each subscale. The tool has an alpha coefficient and retest values of 0.83 and 0.88, respectively. Individual subscales each have a Cronbach's alpha coefficient of 0.87 for bullying, 0.83 for fighting and 0.88 for the victim subscale.[25] The tool was validated among secondary students in Nigeria and had an internal consistency value of 0.84.[26]

CRAFFT alcohol screening tool

Car, Relax, Alone, Forget Friends, Trouble (CRAFFT) screens for substance issues in adolescents 12–21; it has two parts with nine items. The first three questions enquire about whether the respondent has used alcohol, cannabis, or any other illegal substances in the past 12 months. The second part of the tool assesses circumstances around substance use. One of the questions is, 'Do you do drugs by yourself?' The respondent indicates by giving a yes or no answer. A 'yes' answer is given one point, and a 'no' answer is given zero points. A score above two on the second part suggests a possible substance problem; it has good internal consistency and high reliability.[27] It was used in a study with a similar population in Nigeria and showed good internal consistency with a Cronbach's alpha of 0.85.[28]

Strengths and difficulties questionnaire

This assessment tool consists of five subscales, each with five items, comprising 25 items; its subscales evaluate conduct, emotion, hyperactivity-inattention, peer relationships and prosocial behaviour. The tool uses a three-point Likert scale, and respondents answer to what degree a certain symptom applies to them. For each subscale, a score range of 0–10 is possible.

The investigators for our study focused solely on the conduct subscale, which is evaluated by questions 5, 7, 12, 18 and 22. A score of more than five on this subscale indicates a high risk of a clinically significant conduct problem. The overall tool Cronbach's alpha was 0.73, with 0.60 specifically for the conduct subscale.[29]

The cyberbullying questionnaire

The Cyberbullying Questionnaire (CBQ), developed by Calvete in 2010, is a 16-item scale assessing cyberbullying perpetration. It uses a three-point Likert scale to describe the frequency of each mentioned act. Response options are 'never', 'sometimes' and 'often', which are graded 'zero', 'one' and 'two', respectively.[30] The tool was found to have a Cronbach's alpha coefficient of 0.885.[31]

Oslo Social Support Scale

This is a self-reporting tool that assesses social support and has three items. Scores ranging from 3 to 14 are possible. A score of 3–8 indicates poor social support, a score of 9–11 indicates moderate social support, and a score of 12–14 indicates strong social support.[32] It has good psychometric properties and has been widely used to assess social support among different populations and settings, including Botswana.[33]

Data analysis

Our study utilised the Statistical Package for Social Sciences version 28 for data analysis. Categorical variables such as gender, bullying and conduct disorder traits were described using frequencies and percentages, while continuous variables like age were expressed as mean (standard deviation [SD]). The distribution of outcome variables, including perpetration, bullying victimisation and cyberbullying by gender, was represented using a bar graph. The scores of the outcome variables, including bullying perpetration, bullying victimisation and cyberbullying, were further analysed. Bivariate analyses, such as independent *t*-tests and Pearson's correlation, were used to explore the relationship between outcome variables and the risk factors. A single-step multiple regression model, incorporating all significant variables identified in the bivariate analysis, was conducted to determine the predictors of the outcomes. A *p*-value of less than 0.05 was considered statistically significant.

Ethical considerations

An application for full ethical approval was made to the Research and Ethics Committee of the University of Botswana, and ethics consent was received on 08 November 2022. The ethical clearance number is HPRD: UBR/RES/IRB/BIO/GRAD/314. The research was also approved by the Ministry of Health and Wellness Internal Review Board (IRB) Botswana (HPRD: 6/14/1) and the management of Lobatse Senior Secondary School. All procedures carried out in studies involving human participants were conducted in accordance with the ethical standards of the institutional and national research committee, as well as with the 1964 Helsinki Declaration and its subsequent amendments or equivalent ethical standards. Written informed consent was secured from the parents or guardians of the participants, and assent to participate was also obtained from the respondents after explaining the purpose, benefits and risks in simple language. Data collected were anonymised, and confidentiality was maintained.

Results

A total of 372 questionnaires were completed. The mean age (SD) of participants was 16 years (1.028), with a slightly larger proportion of students doing form 4 (51.1%). Females were more than males at 190 (51.1%) (Table 1).

The overall prevalence of bullying was 23.2%, 33.1% and 42.5% for perpetration, victimisation and cyberbullying, respectively. Females were victimised more than males, 66 (53.7%), whereas males perpetrated more than females, 60 (69.8%). Both sexes were equally represented in cyberbullying perpetration. Figure 1 depicts the severity of bullying behaviour by gender. Only a small percentage (15.6%) of the participants reported having strong social support. One hundred (26.9%) students had a possible substance use problem. Table 2 shows the clinical characteristics of the sample.

Table 3 and Table 4 show the association between bullying behaviour and independent variables. Factors associated with bullying perpetration were being male (t = 2.774, p = 0.006), poor satisfaction with teachers (t = –2.416, p = 0.033), history of being arrested (t = 2.402, p = 0.017), perceived poor social support (t = 4.279, $p \leq 0.001$), substance use problem (t = –2.848, p = 0.005) and having a conduct problem (t = –4.170, $p \leq 0.001$). Bullying victimisation was found to be associated with having a conduct problem. Cyberbullying perpetration was associated with being a day scholar, having a previous history of arrest and having conduct problems.

Variables found to be significant on bivariate regression were entered into the multivariate model, and the results are seen in Table 5. Being male (B = –0.143, p = 0.004), having poor social support (B = –0.193, $p < 0.001$), having a possible substance use problem (B = 0.157, p = 0.002) and having conduct disorder (B = 0.276, $p \leq 0.001$) were found to be significantly associated with bullying perpetration. Having a conduct problem was the only factor associated

TABLE 1: Demographic characteristics of the participants.

Variable	Statistic			
	Mean	SD	Frequency	%
Age years	16.61	1.028	-	-
Number of points	34.03	7.252	-	-
Gender				
Male	-	-	182	48.9
Female	-	-	190	51.1
Total	-	-	372	100.0
Frequency of religious participation				
Rarely or never	-	-	106	28.5
Sometimes	-	-	158	42.5
Often to regularly	-	-	108	29.0
Total	-	-	372	100.0
Nationality				
Citizen	-	-	366	98.4
Non-citizen	-	-	6	1.6
Total	-	-	372	100.0
School	-	-		
Day scholar	-	-	300	80.6
Boarding	-	-	72	19.4
Total	-	-	372	100.0
Level of satisfaction with teachers				
Very satisfied	-	-	26	7.0
Satisfied	-	-	94	25.3
Neutral	-	-	196	52.7
Dissatisfied	-	-	43	11.6
Very dissatisfied	-	-	13	3.5
Total	-	-	372	100.0
History of being arrested				
Yes	-	-	12	3.2
No	-	-	360	96.8
Total	-	-	372	100.0

SD, standard deviation.

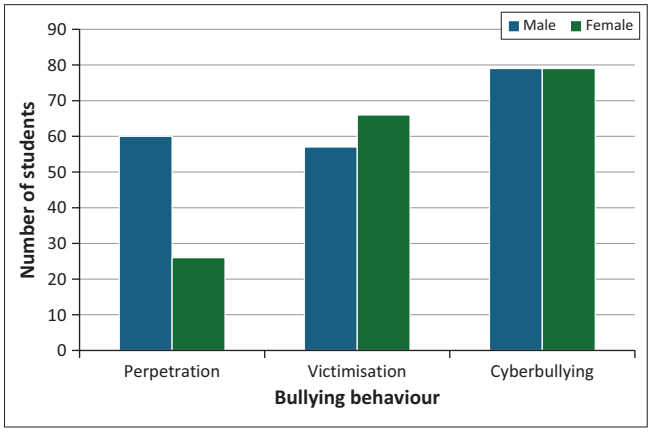

FIGURE 1: Bullying behaviour by gender.

TABLE 2: Descriptive findings on clinical characteristics of study participants.

Variable	Statistic	
	Frequency	%
Bullying perpetration severity		
No to Mild	286	76.9
Moderate	72	19.4
Severe	14	3.8
Total	372	100.0
Bullying victimisation severity		
No to Mild	249	66.9
Moderate	65	17.5
Severe	58	15.6
Total	372	100.0
Cyberbullying		
Present	158	42.5
Absent	214	57.5
Total	372	100.0
Social support		
Poor	126	33.9
Moderate	188	50.5
Strong	58	15.6
Total	372	100.0
Possible conduct problem		
Present	221	59.4
Absent	151	40.6
Total	372	100.0
Possible substance use		
Present	100	26.9
Absent	272	73.1
Total	372	100.0

TABLE 3: Bivariate analysis for factors associated with bullying victimisation, perpetration and cyberbullying.

Variable	Bullying perpetration				Bullying victimisation				Cyberbullying			
	N	Mean	*t*	*p*-value	*N*	Mean	*t*	*p*-value	*N*	Mean	*t*	*p*-value
Gender												
Male	182	6.54	2.774	**0.006**	182	3.81	-0.640	0.523	182	17.36	1.473	0.142
Female	190	4.83	-	-	190	4.11	-	-	190	17.02	-	-
Rel participation												
Never-Sometimes	264	5.90	1.176	0.240	264	3.72	-1.695	0.091	264	17.10	-1.137	0.256
Often	108	5.09	-	-	108	4.56	-	-	108	17.39	-	-
School												
Day scholar	300	5.73	0.435	0.644	300	3.97	0.038	0.969	300	17.30	2.012	**0.045**
Boarding	72	5.39	-	-	72	3.94	-	-	72	16.71	-	-
Satisfaction with teachers												
Satisfied	120	4.70	-2.416	**0.033**	120	3.93	-0.088	0.930	120	16.93	-1.486	-0.138
Dissatisfied	252	6.13	-	-	252	3.98	-	-	252	17.30	-	-
Arrested												
Yes	12	9.75	2.402	**0.017**	12	4.67	1.367	0.173	12	18.75	2.483	**0.013**
No	360	5.53	-	-	360	3.91	-	-	360	17.13	-	-
Social support												
Absent	126	7.49	4.279	**< 0.001**	126	3.94	-0.056	0.955	126	17.09	-0.589	0.557
Present	246	4.73	-	-	246	3.97	-	-	246	17.23	-	-
Substance use												
Absent	272	5.13	-2.848	**0.005**	272	3.92	-0.286	0.775	272	17.05	-1.926	0.055
Present	100	7.12	-	-	100	4.07	-	-	100	17.55	-	-
Conduct disorder												
Absent	147	4.16	-4.170	**< 0.001**	147	3.21	-2.852	**0.005**	147	16.66	-3.799	**< 0.001**
Present	221	6.77	-	-	221	4.53	-	-	221	17.55	-	-

Note: significant variables are indicated in bold.

TABLE 4: Pearson's inter-correlation of the continuous variables.

Measures		1	2	3	4	5	6	7	8	9
1	Perpetration	1	**0.304****	**0.239****	0.047	0.006	-0.020	**-0.23****	**0.28****	**0.236****
2	Victimisation	-	1.000	0.044	**-0.130***	-0.043	0.025	-0.046	**0.195****	0.059
3	Cyberbullying	-	-	1.000	0.075	0.024	-0.010	0.028	**0.191****	**0.160****
4	Age	-	-	-	1.000	**-0.189****	0.095	0.027	-0.055	0.047
5	Points	-	-	-	-	1.000	0.039	0.036	-0.062	-0.066
6	Number of siblings	-	-	-	-	-	1.000	0.019	0.019	0.043
7	Social support	-	-	-	-	-	-	1.000	0.033	**-0.128***
8	Conduct	-	-	-	-	-	-	-	1.000	0.092
9	Substance use	-	-	-	-	-	-	-	-	1.000

Note: significant variables are indicated in bold.
*, Correlation is significant at 0.05 (two-tailed); **, Correlation is significant at 0.01 level (two-tailed).

TABLE 5: Multiple regression analysis of factors associated with bullying.

Variables	B	*t*	*p*
Bullying perpetration			
Gender	-0.143	-2.932	**0.004**
Level of satisfaction with teachers	0.060	1.234	0.218
History of arrest	-0.036	-0.740	0.460
Social support	-0.193	-3.978	**< 0.001**
Substance use	0.157	3.199	**0.002**
Conduct problem	0.276	5.650	**< 0.001**
Bullying victimisation			
Conduct problem	0.195	3.817	**< 0.001**
Cyberbullying			
School	-0.117	-2.311	**0.021**
History of arrest	-0.059	-1.135	0.257
Substance use	0.136	2.657	**0.008**
Conduct problem	0.177	3.452	**< 0.001**

Note: significant variables are indicated in bold.

with bullying victimisation (B = 0.0276, $p \leq 0.001$). Factors significantly associated with cyberbullying were being a day scholar (B = –0.117, p = 0.021), having a substance use problem (B = 0.136, p = 0.008) and possible conduct disorder (B = 0.177, $p \leq 0.001$).

Discussion

We aimed to explore the prevalence of bullying behaviour and its associated risk factors among senior school students in Botswana. The findings of the study revealed that victimisation, perpetration and cyberbullying were prevalent among 33.1%, 23.2% and 42.5% of the participants, respectively. The study further identified factors that were significantly associated with the outcome variables, including boarding or day scholar status, social support and possible substance and conduct disorders.

Approximately one-third of the participants in the study acknowledged being subjected to bullying by other individuals. This percentage is comparatively lower than the prevalence rate of roughly 50% in a previous study involving adolescents in Lebanon. However, it is higher than the rate

observed among students in Pakistan, which was approximately 25% of the participants.[34,35] Despite employing the same tool, the Illinois Bully Scale, the differences in the prevalence of bullying could be attributed to variations in methodology and cultural distinctions. Furthermore, because bullying instils shame in the victim, some experiences may not have been recollected, or participants may have been unwilling to disclose, thus leading to lower/differences seen in the prevalence in Botswana. The high rates of victimisation documented in our study may suggest the absence of regulations against bullying or anti-bullying programmes in schools located in Botswana, as in other countries.[36]

In our study, the incidence of bullying perpetration was found to be slightly less than a quarter, while in Iran, the percentage was lower than the incidence of bullying perpetration using the same tool, which was found to be approximately one-fifth.[37] Furthermore, the results showed that the incidence of bullying perpetration was higher than reported by previous studies done in Nigeria, Egypt and South Africa, which were studied more than 5 years ago.[13,21,38] These differences may be because of variations in each study's definitions and measures of bullying. Additionally, the study's findings suggest an increase in bullying prevalence, highlighting the need for further research into possible solutions.

Cyberbullying is a growing phenomenon with the increased usage of gadgets among teenagers in Botswana, as in other countries.[30,39] While certain media outlets in Botswana have made note of the adverse effects of cyberbullying, the present study represents the first instance of documenting a prevalence of 42.5% of respondents who admitted to having engaged in at least one cyberbullying behaviour. This figure is comparable to that found among adolescents in Mexico and Spain using the same assessment tool, at 41.9% and 44.1%, respectively.[30,39]

Cyberbullying is linked to the tragic deaths of young people in the United States and has prompted widespread concern about its prevalence and psychological impact.[40] It was reported that in South Africa, students from various grades committed suicide following the circulation of a viral video in the preceding year.[41,42] Nevertheless, in contrast to developed nations, Botswana currently lacks measures to address this escalating issue, as many schools do not possess essential information regarding cyberbullying, including its causes, consequences and how it may differ from conventional forms of bullying encountered within academic environments. In response to this, Botswana should follow the example of the United States by implementing laws that mandate schools to include electronic harassment in their anti-bullying policies.[43]

It is worth noting that the prevalence of this phenomenon is comparatively higher among day students than boarding students, primarily because of the former's unrestricted access to electronic media and the internet. The findings suggest that boarding students' limited access to such resources might protect against this phenomenon. However, these outcomes reinforce the observation that cyberbullying is a highly prevalent phenomenon among adolescents, necessitating the involvement of all stakeholders in mitigating its deleterious effects. More importantly, parents must be made aware of the potential ramifications of unrestricted access to social media and the deleterious effects of cyberbullying. As social media continues to expand its reach, the impact on young people's mental and emotional well-being is becoming increasingly challenging to ignore. Therefore, parents must be equipped with the necessary information to help them navigate social media's complex and rapidly evolving landscape.

The statistical analysis revealed that males tend to engage in bullying behaviour more often than females, and this association persisted even after controlling for other variables in the regression model. Based on the available data, it can be anticipated that bullying is more prevalent among boys, while girls are more often targeted as victims of bullying. This pattern also echoes previous research, such as that carried out by Reis e Silva and colleagues,[44] who suggested that the prevalence of bullying may be linked to cultural norms that assign inferior status to women, rendering them more susceptible to victimisation. In Botswana[13,45] and many other African countries, it is observed that certain male behaviours are favourably regarded, especially those that involve aggression and displays of dominance. Men are expected to display strength while protecting their female siblings and defending their rights.[45] On the other hand, women are expected to adopt a passive and nurturing role. This gender differentiation is further reflected in the choice of toys that parents purchase for their children. As elsewhere,[13,46] boys are often given toys that symbolise aggression, such as guns and baseball bats; conversely, girls are more likely to receive dolls and teddy bears that represent caring and passivity.

Other factors that may contribute to the greater likelihood that males will engage in bullying can be explained by the increased aggressive behaviour because of underlying biological mechanisms[47] and the higher tendency to engage in psychoactive substance use. Testosterone has been implicated as a potential cause of male aggression, but human studies have shown a much smaller association between the two.[48] Studies assessing gender differences in aggression have shown that men have higher amygdala activation in response to provocation and suggested that this could be one of the reasons for their aggressive behaviour.[49] In the same vein, participants who admitted to using psychoactive substances were more likely to bully others, either physically or electronically, as had been reported by previous authors.[13,38,50] Certain substances have been found to negatively impact cognitive function, resulting in impaired decision-making, leading to disinhibition and an increase in aggressive behaviour. These effects may contribute to the occurrence of bullying behaviour.[51] While the former factor, about the prevalence of bullying in school systems, is not

readily modifiable, one strategy to mitigate this issue in vulnerable populations is to regulate access to psychoactive substances. By limiting access to these substances, potential instigators of bullying may be less likely to engage in such behaviour, leading to a safer and more inclusive learning environment.

The findings of our study indicated that delinquent behaviour correlates with both physical bullying and cyberbullying. A study, which involved a comparison of 206 participants with Conduct Disorder (CD) and typically developing controls aged between 9 and 19 years, found that individuals with conduct behaviour were more likely to engage in cyberbullying,[52] while another study has linked physical bullying with the same disorder.[13] These findings underline the importance of addressing delinquent behaviour in schools as a potential risk factor for both physical and cyberbullying. Moreover, the current study found a correlation between bullying victims and perpetrators (Table 4), indicating a cycle of troubled children who require treatment rather than punishment as culpable offenders, as previously reported.[13,52] Research has shown that individuals who have been bullied may engage in bullying behaviour towards others to cope with the emotional burden of their victimisation. This is often accomplished through the defence mechanism of projection.[53] The study suggests that a proactive approach is needed to address this cycle of bullying and victimisation, which has serious consequences for the well-being of young people. Therefore, appropriate measures must be taken to ensure that children are provided with the necessary support and guidance to break the cycle of bullying and victimisation and promote positive social interactions.

In line with the above observations, the present study has identified social support as a potential factor in preventing bullying perpetration, as it was observed that individuals with social support were less likely to be involved in such acts. Bullying perpetrators often have a strained relationship with their teachers, according to Olashore and colleagues,[13] which could be the case in Botswana; this may be because of difficulties in following academic instructions and rules. As a result, they are often ignored or disliked by their peers, leading them to adopt a more aggressive approach to gain recognition and respect or a feeling of 'fitting in'. While the present study may not provide conclusive evidence to support this theory, it reinforces the importance of providing support to these individuals, particularly in addressing their emotional, psychological and academic needs. It emphasises the importance of attending to their needs, which is crucial in preventing bullying and fostering a positive learning environment.

Limitations

It is important to note that certain limitations of this study must be considered when interpreting the results. Firstly, the sample size used in the study was small, and it was conducted only in one town in Botswana, which raises questions about the generalisability of the findings. Secondly, the study was of a cross-sectional design, meaning it cannot establish causality. Thirdly, although the survey covered various forms of bullying, it did not specify the type. Finally, the self-report questionnaire used in the study may have resulted in an underestimation of the prevalence of negative behaviours, as participants may have been unwilling to report them. Furthermore, none of the questionnaires used had been validated for this specific population, thus emphasising the need for a cautious interpretation. The self-reporting and lack of validation for the tool render a possibility that some may report minor conflict as bullying behaviour. In an attempt to mitigate this, those who scored mildly were removed from further analysis. Consequently, interpretation of the results may require caution.

However, it has some notable strengths. Firstly, it is the first study to examine bullying behaviour and its related factors in Botswana. Secondly, it also explores the prevalence of cyberbullying, which has been reported in the country but has not been thoroughly researched. Additionally, the study covers a range of factors that contribute to bullying, providing valuable insights for targeted prevention programmes aimed at both victims and perpetrators.

Conclusion

The findings indicate an increase in the incidence of bullying, indicating a need for further research to identify potential solutions. It is crucial to take appropriate measures to ensure that children receive the necessary support and guidance to break the cycle of bullying and victimisation and promote healthy social interactions. The study also highlights the factors that contribute to bullying, emphasising the importance of addressing the emotional, psychological and academic needs of both perpetrators and victims. Parents must be equipped with the necessary information to help them navigate social media's complex and rapidly evolving landscape to protect their children from its negative effects.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

T.M. conceptualised the study and drafted the initial manuscript. A.A.O. and H.R. supervised the project. T.M., A.A.O., P.O. and H.R. reviewed and edited the final version of the manuscript. All authors read and agreed to the final draft.

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Data availability

The datasets used and analysed during the current study are available from the corresponding author, T.M., upon reasonable request.

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