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Bullying Victimization among Secondary School Students in Lagos, Nigeria: Emotional, Behavioral and Mental Health Correlates

Increase Ibukun Adeosun^{1*}, Abosede Adegbohun², Adebayo Jejeloye², Olufemi Oyekunle², Oyewale Ogunlowo² and Adunola Pedro²

¹Department of Mental Health, Benjamin Carson Snr. School of Medicine, Babcock University,
Ilishan-Remo, Ogun State, Nigeria.
²Department of Psychiatry, Federal Neuro-Psychiatric Hospital Yaba, Lagos, Nigeria.

Authors' contributions

The work was carried out in collaboration between all authors. Author IIA designed the study, managed the literature search, wrote the protocol and supervised the work. All authors were involved in data collection. Authors IIA and AA managed data entry and statistical analysis. All authors read and approved the final manuscript.

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ABSTRACT

Aim: There is dearth of research on the mental health correlates of bullying in sub-Saharan Africa. The current study aimed to determine the association between bullying victimization (being bullied) and the presence of emotional and behavioral problems among secondary school students in Lagos, Nigeria.

Study Design and Methods: Using a cross-sectional study design, secondary school students (n=412) completed the Strength and difficulty Questionnaire (SDQ) and the violence and injury module of the Global school-based health survey questionnaire used to assess mental health problems and bullying victimization respectively.

Results: The mean age of the participants was 15.9 (±1.3) years, and 58.9% were males. More than half (56.8%) of the sample had been victims of bullying in the past month. Males experienced

significantly higher rates (63.4% vs. 47.4%) of bullying than females (p=0.002). Bullying victimization was significantly associated with the presence of emotional problems (p=0.005), conduct problems (p<0.001), hyperactivity problems (p<0.001) and mental health problems/total SDQ difficulties scores (p<0.001). On regression analysis, bullying victimization was predictive of conduct problems (p<0.001, OR=8.38, 95% Cl=3.87-18.14), hyperactivity (p=0.002, OR=10.20, 95% C.l=2.32-44.8), emotional problems (p=0.015, OR= 1.683, 95% C.l=1.11-2.56) and mental health problems (p<0.001, OR= 3.164, 95% Cl= 1.838-5.444).

Conclusion: Our findings highlight the need for interventions to prevent and combat bullying, as well as facilitate prompt referral of victims for appropriate mental health assessment.

Keywords: Bullying; bullying victimization; mental health problems; emotional problems; behavioral problems.

1. INTRODUCTION

Children and adolescents spend a considerable portion of their day-time in the school, away from the scrutiny of their parents and guardians. While on the overall, the interface between students provides excellent opportunities for learning, social and mental development, students may become victims of violence in the form of bullying 'behind the scene'. Bullying has been defined as repeated emotional, verbal, or physical attacks against other persons or peers who are vulnerable because of size, limited strength, being outnumbered or other forms of imbalance of power [1]. Bullying perpetrators are not limited to the use of physical force such as beating, pushing or kicking to exert control or cause distress to their victims; they also employ verbal aggression, threats, taunting, exclusion, manipulation of social relationships, and the medium of the internet against the bullied victim [2]. Bullying is a global problem among school children in North America [2-5], Europe [2,6-8], Australia [9-10], Asia [11,12] and Africa [13-15]. Large multi-country surveys spanning 66 countries indicate that the prevalence of bullying victimization among school children vary widely across settings from about 7 to 70% [16].

Bullying has been associated with negative mental health consequences including depression [17-20], anxiety [17-19,21-22], low self esteem [23], suicidal behavior [17,24-25], aggressive behavior, social withdrawal and hyperactivity [17]. While studies have highlighted high rates of bullying, in the range of 70-85%, among Nigerian school children, there is scarcity of data on the relationship between bullying and mental health problems in Nigeria [26-29]. Therefore, the current study aimed to determine the association between bullying victimization (being bullied) and the presence of emotional and behavioral problems among secondary school students in Lagos, Nigeria. Secondarily, the prevalence (past-month) of bullying victimization was assessed among the participants. Based on the extant literature, it was hypothesized that there would be an association between bullying victimization and presence of mental health problems among the students.

2. METHODS

2.1 Study Design and Setting

The study design was a cross-sectional descriptive study of a sample of students attending two public co-educational secondary (high) schools in Lagos. Lagos is the largest metropolis in Nigeria with a population of about 15 million. Nigeria is a low-middle income sub-Saharan country located in West Africa.

2.2 Ethical Consideration

Prior to the commencement of the study, ethical approval was obtained from the Lagos Educational Authority District Office. The students were duly educated about the nature and purpose of the study and their assent obtained before recruitment into the study. Informed Consent was also obtained from the parents/guardians of the participating students. The participating students (n=412) were recruited from classes 4 and 5 (grade 10 to 11) in the two secondary schools by convenient sampling. A total of 412 students participated in the study, out of which 380 (92.2%) completed questionnaires were suitable for analysis.

2.3 Study Instrument and Procedure

The study instrument consisted of the violence and injury module of the Global school-based

health survey questionnaire (GSHS) [30] and the Strength and Difficulty Questionnaire (SDQ) [31] which was used to assess bullying and mental health problems respectively. The participants completed the questionnaires by self-report. The GSHS was developed by the WHO in collaboration with UNICEF, UNESCO, UNAIDS and technical assistance from CDC. The GSHS clearly defines what constitutes bullying before eliciting responses on the occurrence of bullying. The SDQ contains twenty five item questions and five clinical sub-scales of; Emotional Symptoms, Conduct Problems, Hyperactivity, Peer Problems and Pro-social Behavior. The sum of scores on scales of Emotional Symptoms, Conduct Problems, Hyperactivity and Peer Problems account for Total Difficulties score which can range from 0 to 40. The subscales and total scale also have different cut-off scores for the presence/absence of mental health problems or probable psychiatric disorder.

2.4 Statistical Analysis

Data was analyzed with the SPSS-IBM (version bullying 20). Past-month prevalence of victimization (being bullied) and presence of emotional or behavioral problems computed as frequencies and percentages. The association between the two categorical variables of interest was determined using the chi-square test. The level of significance was set at p<0.05. Significant mental health variables on bi-variate analysis were entered into logistic regression analysis controlling for age and gender.

3. RESULTS

The mean age of the participants was 15.9 ± 1.3 years, and 58.9% were males. More than half (56.8%) of the sample had been victims of bullying in the past month. Males experienced significantly higher rates (63.4% vs. 47.4%) of bullying than females (p=0.002) (Table 1).

Nearly a third (32.4%) of the bullied victims had conduct problems, while only 4.9% of those who were not bullied had conduct problem (p<0.001), indicating a statistically significant association between bullying victimization and conduct problems (Table 2).

A tenth (10.2%) of the victims of bullying had hyperactivity problems, in comparison to 1.2% among those who had not been bullied. Bullying victimization was significantly associated with the presence of hyperactivity problems (p<0.001) (Table 3).

More than half (54.6%) of the bullied victims had emotional problems, while 40.2 % of those who were not bullied had emotional problems. Bullying victimization was significantly associated with the presence of emotional problems (p=0.005) (Table 4).

On the other hand, there was no significant association between peer problems and bullying victimization (p=0.436). Overall, 32.4% of bullying victims had mental health problems (based on total SDQ difficulties scores), while 13.4% of those who were not bullied had mental health problems. Being bullied was significantly (p<0.001) associated with the presence of mental health problems (Table 5).

On regression analysis, bullying victimization was independently associated with conduct (B=2.126, Wald=29.09, p<0.001, problems OR=8.38, 95% CI=3.87-18.14), hyperactivity (B=2.323, Wald= 9.465, p=0.002, OR=10.20, 95% C.I=2.32-44.8), emotional problems (B= 0.521, Wald= 5.897, p=0.015, OR= 1.683, 95% C.I=1.11-2.56) and mental health problems (B=1.152, Wald=17.288, p<0.001, OR= 3.164, 95% CI= 1.838-5.444). This indicates that bullied victims were more likely to have conduct problems problems (p<0.001), emotional (p=0.015), hyperactivity (p=0.002) and mental health problems (p<0.001) than non-bullied students.

Table 1. Association between gender and bullying victimization

Gender	Bullied n (%)	Not bullied n (%)	Total	X ²	р
Male	142 (63.4)	82 (36.6)	224	9.545	0.002
Female	74 (47.4)	82 (52.6)	156		

Table 2. Association between bullying victimization and conduct problems

Bullying victimization	Conduct problem		Total	X ²	Р
	Yes n (%)	No n (%)			
Bullied	70 (32.4)	146 (67.6)	216	43.3	<0.001
Not bullied	8 (4.9)	156 (95.1)	164		

Table 3. Association between bullying victimization and hyperactivity problems

Bullying victimization	Hyperactivity problem		Total	Χ²	Р
	Yes n (%)	No n (%)	_		
Bullied	22 (10.2)	194 (89.8)	216	12.6	<0.001
Not bullied	2 (1.2)	162 (98.8)	164		

Table 4. Association between bullying victimization and emotional problems

Bullying victimization	Emotional problem		Total	X^2	Р
	Yes n (%)	No n (%)			
Bullied	118 (54.6)	98 (45.4)	216	7.7	0.005
Not bullied	66 (40.2)	98 (59.8)	164		

Table 5. Association between bullying victimization and mental health problems

Bullying victimization	Mental health problems		Total	Χ²	Р
	Yes n (%)	No n (%)	_		
Bullied	70 (32.4)	146 (67.6)	216	18.3	<0.001
Not bullied	22 (13.4)	142 (86.6)	164		

4. DISCUSSION

The current study aimed to fill part of the gap in knowledge regarding the mental health problems associated with bullying among secondary school students in Nigeria. Secondarily, the past month prevalence of bullying victimization was also assessed. More than half (56.8%) of the students in the current study reported being victims of bullying in the past month. This finding is congruent with previous reports that bullying is common among school children. Though rates of bullying victimization vary widely across studies possibly due to cultural differences in reporting and methodological differences such as the definition of what constitutes bullying and timeframe assessed, evidence consistently indicate that bulling is a significant problem among school children globally [2-16]. A school-based multinational survey of students from five African countries; Namibia, Uganda, Zimbambwe. Zambia and Swaziland found that 27 to 50% (average of 42%) were victims of school based violence in the past year [14]. Another larger scale multi-national survey of bullying among students from 40 countries in North America and Europe reported 2-months prevalence rates ranging from 9% in Sweden to 45% in Luthania

[2]. Studies conducted in Nigeria indicated that 70-85% of school children are victims of bullying.

In the current study, victims of bullying had significantly higher rates of emotional problems, and bullying victimization was independently emotional associated with problems regression analysis. This is convergent with previous research demonstrating the link between bullying victimization and a wide range of emotional problems including depression, anxiety, low self esteem, loneliness and social withdrawal [7,17,19,32-33]. Bullying involves physical or psychological threat to the well-being of the victim, thereby constituting a psycho-social stressor or risk factor for emotional distress. On the other hand, studies have shown that the presence of emotional problems increase the likelihood of being bullied [13,34,35]. Bully perpetrators tend to target students who are fearful, withdrawn, and lonely as their victims. In view of the evidence from longitudinal studies that bullying negatively impacts on emotional well-being, the latter finding indicates that victims of bullying who develop emotional problems are vulnerable further re-victimization to [18,21,32,36]. This highlights the need for

interventions to prevent the vicious cycle of bully victimization from being perpetuated [33].

Another important finding of the current study is the correlation between bullying victimization and hyperactivity problems, which was upheld after controlling for age and gender on regression analysis. Previous studies have shown that victims of bullying are at increased risk of developing hyperactivity problems [37-38]. Conversely, there is also research evidence that hyperactive children are more prone to peer victimization due to their disruptive and impulsive behavior. Though the direction of the relationship between victimization and hyperactivity in our sample await clarification from prospective research, there are mental health implications and opportunities for interventions regardless of whether bullying is an antecedent or consequence of hyperactivity. Children with ADHD may require more surveillance to protect them from being bullied in order to forestall worsening of their clinical and educational outcomes. On the other hand, children who have been victimized may need to be screened for hyperactivity problems so as to inform the need for appropriate mental health interventions.

In keeping with the extant literature, we found a correlation between bullying victimization and conduct problems among the students. On regression analysis, bullying victimization was independently associated with conduct problems. The direction of the relationship between bullying and conduct problems has generated a lot of research interests. Both bullying victimization (being bullied) and bullying perpetration (being a bully) have been reported to be independently associated with the presence of conduct problems [37,39]. There is also evidence that victims of bullying are at risk of victimizing others, and bullying victimization increases the likelihood of involvement in bullying perpetration to a greater extent than bullying perpetration increase of the likelihood experiencina victimization [40]. Longitudinal studies have shown that victimization increases the risk of developing conduct problem and aggressive behavior [41-44]. Conversely, children with conduct problems also stand the risk of being bullied [34]. A meta-analysis by Reijntjes et al. [45] demonstrated that externalizing problems such as conduct problems were antecedents and consequences of victimization This bidirectional reciprocal by peers. relationship, which has been reiterated by subsequent prospective studies, indicates a vicious cycle which could perpetuate bullying and conduct problems [9,45-47].

Our findings have several important implications. Firstly, students who had been victimized dominated the sample, suggesting that bullying may be perceived as the norm, rather than an exception. Secondly, the correlation between bullying victimization and emotional behavioral problems supports the rationale for interventions to prevent bullying. Thirdly, the presence of emotional, hyperactivity or conduct problems among school children may serve as proxy for identification of risk for bullying victimization or consequence of victimization. This provides compelling evidence on the need to sensitize stakeholders to look out for these emotional and behavioral changes in order to facilitate prompt referral for appropriate mental health interventions.

4.1 Research Limitations

The findings of the current study should be interpreted in the context of its limitations. Firstly, the cross-sectional design of the study limits assertion about causality. Secondly, participants were recruited by convenient sampling from public schools in an urban setting and their experiences may not be consistent with those of students from other settings. Thirdly, bullying and mental health problems were elicited by self-report which could be subjected to influences of social desirability bias. However, the anonymous nature of the questionnaire may reduce the likelihood of such influences. Furthermore, the relationship between bullying and mental health problems may be confounded by other factors such as family, parental and other psycho-social factors which were not controlled for in the current study. In spite of these limitations, our study has contributed to the body of knowledge on the mental health correlates of bullying, a previously underresearched subject in the studied population, using recognized validated measures in a moderate sample of adolescents.

5. CONCLUSION

In conclusion, we found that 56.8% of a sample of secondary school students in Lagos, Nigeria had experienced bullying victimization in the past month. Bullying victimization was independently associated with conduct problems (p<0.001, OR=8.38), hyperactivity (p=0.002, OR=10.20),

emotional problems (p=0.015, OR= 1.683) and mental health problems (p<0.001, OR= 3.164). Our findings highlight the need for interventions to prevent and combat bullying, as well as facilitate prompt recognition and referral of victims for appropriate mental health support.

6. RECOMMENDATIONS

In view of the evidence that victims of bullying are more likely to experience emotional, behavioural and mental health problems, there is need to raise awareness about the negative impact of bullying in schools and communities through school-based educational programs and public awareness campaigns, including use of print, electronic and social media. Such campaigns have been shown to have positive impact in reducing rates of bullying in Northwestern Europe. Furthermore, strategies to prevent bullying should be implemented [48]. These include policy changes to make the school environment safer, ensuring consistent rules and reprimands for bullying perpetrators, mental promotion initiatives, as well as health identification and removal of barriers to reporting. Victims of bullying should be screened for mental health problems and promptly referred for appropriate mental health interventions, if Finally, further local research is indicated. required to generate empirical evidence to inform intervention targeted at preventing eradicating bullying among school children in Nigeria.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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