Prevalence and Association of Peer Pressure and Media Influence with Peer Victimization and Intervention Strategies among In-School Adolescents in Imo State, Nigeria

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Abstract

Peer victimization is an important adolescent public health concern associated with adverse psychological, social, and educational outcomes. Evidence from Imo State, Nigeria, remains limited. This study determined the prevalence of peer victimization, examined its associations with peer pressure and media influence and formulate intervention strategies among in-school adolescents in Imo State, Nigeria. The study population comprised 975,000 in-school adolescents in Imo State. A concurrent triangulation mixed methods approach was adopted. The sample size was 3,042, comprising 2,940 drawn through multi-stage sampling procedure for quantitative data collection, 72 drawn using convenience sampling for qualitative data collection, and 30 experts that indicated the developed strategies appropriate. Data were collected using a structured questionnaire incorporating the Multidimensional Peer-Victimization Scale, an 8-item Peer Pressure Questionnaire, and a 9-item Media Influence Scale, while In-depth Interview Guide was used for qualitative data collection. Data were analysed using frequencies, percentages, chi-square tests, and multivariable logistic regression at 0.05 significance level. Results showed that peer victimization was reported by 2,022 (68.8%) respondents. Higher peer pressure and media influence were reported by 23.2% and 25.3% of respondents, respectively. Peer pressure was significantly associated with peer victimization at the bivariate level ($p = .019$). However, after adjustment, neither higher peer pressure (AOR = 1.072, $p = .507$) nor higher media influence (AOR = 0.845, $p = .106$) was significantly associated with peer victimization. Academic class, school type, school location, and parental income were independently associated with victimization. Peer victimization was highly prevalent among the surveyed adolescents. School authorities should implement targeted peer victimization prevention programmes for in-school adolescents to promote safer and more supportive school environments.

Keywords: Prevalence, Media influence, Peer pressure, Bullying, Peer victimization, In-school adolescents, Nigeria

Introduction

Peer victimization is a pervasive adolescent public health concern that affects young people across countries and educational settings. A recent global meta-analysis of 116 studies involving 603,231 children and adolescents estimated that approximately one in four (25%, 95% CI [22%, 28%]) had experienced bullying victimization, highlighting the substantial global burden of harmful peer experiences (Ariani et al., 2025). Similarly, analysis of Global School-based

Student Health Survey data from 83 low-, middle-, and high-income countries involving 317,869 adolescents aged 12–17 years found a pooled bullying-victimization prevalence of 30.5% (95% CI [30.2%, 31.0%]), with prevalence reaching 43.5% in the African Region (Biswas et al., 2020). More recent African evidence remains concerning. A systematic review and meta-analysis of 25 studies involving 41,716 school-aged adolescents reported a pooled bullying-victimization prevalence of 46.35% (95% CI [41.45%, 51.24%]) across Africa (Tadesse et al., 2025). The World Health Organization (WHO) similarly reports that approximately one quarter of children and adolescents globally are exposed to bullying, highlighting the importance of violence prevention within schools and other settings in which young people develop (WHO, 2026).These findings indicate that peer victimization is not merely an isolated school disciplinary issue but an important population-level concern with implications for adolescent health and development.

Peer victimization refers to experiences in which adolescents are subjected to harmful behaviours by peers, including physical attacks, verbal abuse, social manipulation, exclusion, and attacks on property. The multidimensional nature of peer victimization is reflected in established measures such as the Multidimensional Peer-Victimization Scale, which distinguishes different forms of victimizing experiences (Mynard & Joseph, 2000). The consequences can extend beyond the immediate school experience. Evidence from longitudinal research indicates a reciprocal relationship between peer victimization and internalizing problems, with victimization predicting subsequent emotional difficulties while pre-existing internalizing symptoms may also increase vulnerability to victimization (Christina et al., 2021). A large meta-analysis of longitudinal studies involving 117,520 participants found small but significant bidirectional associations between peer victimization and internalizing symptoms, underscoring the potential for victimization and psychological difficulties to reinforce one another over time.

The school environment is therefore an important setting for understanding and preventing peer victimization. Schools provide adolescents with sustained opportunities for peer interaction and are consequently important contexts in which social norms concerning acceptance, exclusion, aggression, and interpersonal relationships are formed and reinforced. The World Health Organization emphasizes schools as strategic settings for violence prevention because they can shape social norms, strengthen life and social skills, involve parents and communities, and promote safe and supportive learning environments (World Health Organization [WHO], 2019).

Within this social environment, peer pressure may be particularly relevant. Adolescence is characterized by increasing importance of peer relationships, social acceptance, conformity, and identity development. Peer influence can shape adolescents' attitudes and behaviours, although its effects vary according to the behaviour and social context. A meta-analysis of 60 longitudinal studies found a small but significant and robust overall peer-influence effect on adolescent behaviours and attitudes (Laursen & Veenstra, 2021). Thus, peer pressure may influence adolescents' willingness to conform to prevailing peer norms, including norms surrounding aggression, exclusion, ridicule, or other harmful interpersonal behaviours. However, whether peer pressure is independently associated with peer victimization may vary across populations and contexts and requires empirical investigation.

The social environment of adolescents has also expanded beyond face-to-face interactions to include digital and media environments. Adolescents increasingly encounter social content through social networking platforms and other digital media, creating additional opportunities for peer interaction, social comparison, communication, and exposure to aggressive or harmful

content. Recent evidence indicates a significant association between social-media use and cyberbullying victimization. A three-level meta-analysis involving 184,259 children and adolescents found positive associations between social-media use and cyberbullying victimization in both cross-sectional and longitudinal evidence, although the longitudinal association was smaller (Zhang et al., 2026). A recent systematic review of 26 studies involving 138,506 adolescents also identified frequent internet or social-media use among consistently reported microsystem factors associated with bullying victimization, while emphasizing substantial variation across studies and the importance of considering multiple social environments. These findings suggest that media exposure may be relevant to adolescents' experiences of peer victimization, but they do not establish that media exposure itself causes victimization.

Evidence from Nigeria similarly indicates that bullying and peer victimization constitute important concerns among in-school adolescents. In a Nigerian study involving junior secondary school students, bullying prevalence was 59.9%, while characteristics such as delinquent peer association and negative school climate were associated with bullying behaviour (Fenny &Falola, 2020). Also, a cross-sectional study of 621 in-school adolescents in Edo State reported that 51.9% had experienced at least one form of bullying, with physical bullying being particularly common (Ighaede-Edwards et al., 2023). The study also identified differences in bullying according to characteristics such as school class and parental experiences, illustrating the importance of examining contextual factors when studying adolescent victimization in Nigeria. Nevertheless, available Nigerian evidence remains geographically and methodologically varied, and findings from one State cannot necessarily be generalized to adolescents in other parts of the country.

Despite the growing international literature, an important gap remains regarding the simultaneous examination of peer pressure and media influence in relation to peer victimization among in-school adolescents in southeastern Nigeria. Existing studies have often concentrated on the prevalence of bullying, its psychological consequences, or broad demographic and family-related predictors, while comparatively less attention has been given to the specific social influences represented by peer pressure and media exposure. Furthermore, differences in and media environments may produce different patterns of association across populations. Also, there is virtually no qualitative or quantitative study that has been conducted on this area, with a better understanding of the prevalence of peer victimization of in-school adolescents, and their association with peer pressure and media influence.Generating evidence from Imo State is therefore important for determining the extent of peer victimization and identifying social factors that may warrant attention in school-based prevention efforts. This study therefore examined the prevalence of peer victimization and its association with peer pressure and media influence and intervention strategies among in-school adolescents in Imo State, Nigeria. By examining these factors within a large sample of adolescents across diverse school and geographical settings, the study provides locally relevant evidence that may inform health education, school-based violence-prevention programmes, adolescent support services, and policies aimed at promoting safe, supportive, and health-enhancing school environments.

Methods

Study design and setting

This study employed a concurrent triangulation mixed methods approach. The study was conducted in two concurrent phases. The first phase was an institutional-based cross-sectional survey in which 2,940 in-school adolescentswere selected by multistage cluster sampling of the secondary schools from 21 local government areas (LGAs) in Imo State. Questionnaires were completed through a face-to-face interview. The second phase was a qualitative study in which 72 participants were selected using convenience sampling technique. The qualitative phase was based on data collected from individual in-depth interviews from nine of the 21selected LGAs in the study area.

The study setting included secondary schools serving adolescents in junior and senior secondary classes. The study was conducted between February and March 2026 in Imo State, southeastern Nigeria. Imo State comprises 27 local government areas (LGAs) distributed across three major education zones: Owerri, Orlu, and Okigwe. The quantitative survey covered 21 of the 27 LGAs. The State has a mixture of public and private schools located in urban and rural communities. The study setting was selected because of the substantial population of in-school adolescents and the need for localized evidence on peer victimization and its potential social determinants.

Study population

The study population comprised junior and senior in-school adolescents enrolled in public and private secondary schools in Imo State during the 2025/2026 academic session. Based on available National Education Management Information System (NEMIS) and Federal Ministry of Education enrolment statistics, the secondary school population of Imo State was estimated at approximately 975,000 students for the 2025/2026 academic session. The estimate was based on the most recent available State-level enrolment data and projected to the 2025/2026 school year. Participants were in-school adolescents attending school during the period of data collection and who provided the required consent/assent in accordance with the approved research protocol.

Sample size and sampling technique

A multistage cluster sampling technique was used to select 3,000 in-school adolescents from secondary schools across 21 of the 27 Local Government Areas in Imo State, Nigeria, covering the Owerri, Orlu, and Okigwe education zones. Schools were selected to ensure representation of public and private schools as well as urban and rural locations, after which eligible students were selected from the sampled schools and classes.

The sampling proceeded in four phases. Phase one involved selection of 21 of the 27 Local Government Areas (LGAs) in Imo State to provide coverage across the Owerri, Orlu and Okigwe education zones. Phase two involved stratification and selection of secondary schools according to ownership (public and private) and location (urban and rural) to ensure representation of the major school settings. Phase three involved selection of eligible classes within the sampled schools, followed by identification of students who met the inclusion criteria. Phase four involved administration of questionnaires to the selected in-school students. A total of 3,000 questionnaires were administered, of which 2,940 were adequately completed and retained.

Data collection instruments

Following the participants' consent, data were collected using a structured questionnaire consisting of sections addressing sociodemographic characteristics, peer victimization, peer pressure, and media influence. The Participant Information Form collected information on gender, academic class, school type, school location, and parental monthly income. These variables were selected because previous studies have identified sociodemographic and school-context characteristics as potentially relevant to adolescent victimization.

Peer victimization was assessed using the Multidimensional Peer-Victimization Scale developed by Mynard and Joseph (2000). The original MPVS is a 16-item self-report instrument covering four dimensions: physical victimization, verbal victimization, social manipulation, and attacks on property. Items assess the frequency with which respondents experienced specific victimizing behaviours. The scale has demonstrated acceptable psychometric properties across adolescent samples (Eastman et al., 2018; Joseph & Stockton, 2018). Each item is scored from 0 (not at all) to 2 (more than once), producing a total possible score of 0–32, with higher scores indicating greater exposure to peer victimization.

Peer pressure was assessed using an 8-item four-point Likert-type questionnaire. Responses ranged from 1 = strongly disagree to 4 = strongly agree, giving a possible total score of 8–32. The scale midpoint was 20. Scores of 8–20 were classified as lower peer pressure, whereas scores of 21–32 were classified as higher peer pressure.

Media influence was measured using a 9-item four-point Likert-type scale ranging from 1 = strongly disagree to 4 = strongly agree. Possible scores ranged from 9 to 36. Using the scale midpoint of 22.5, scores of 9–22 were classified as lower media influence and scores of 23–36 as higher media influence.

The study instruments were subjected to face and content validation by five experts in health education, psychology and measurement and evaluation units.

A pilot test involving 50 in-school adolescents was conducted to assess the clarity and appropriateness of the instruments and to estimate internal consistency reliability. Cronbach's alpha coefficients of .911 for peer victimization, .710 for peer pressure, and .742 for media influence exceeded the commonly used minimum criterion of .70 for acceptable internal consistency.

A semi-structured in-depth interview guide (IDIG) field-tested was used to collect qualitative data from 72 participants (8 in-school adolescents each), selected using convenience sampling technique from nine selected schools based on the three senatorial districts of Imo State. The questions were formulated in line with the quantitative objectives. The strategies questionnaire was used to collect data on views of the experts for offering strategies to address peer victimization and ensure its mitigation and prevention in secondary schools.

Data collection procedure

This research was developed in accordance with the Ethical Principles of the World Medical Association Declaration of Helsinki for medical research involving human subjects (World Medical Association, 2013). Permission to conduct the study was obtained from the principals of the selected secondary schools in Imo State through an introductory letter from the Department of Health Education, AlvanIkoku Federal University of Education, Owerri.

Data collection was conducted by the research team with the assistance of six trained research assistants. The research assistants were trained on the objectives of the study, administration of the questionnaire, maintenance of participant privacy, appropriate communication with in-school adolescents, and procedures for obtaining valid responses.

Data were collected by administering the questionnaires to in-school adolescents. In order to obtain the participation of the respondents, the research team met with the Principal of the various secondary schools selected across Imo State, requesting their permission to study their subjects. After agreement with the Principals, informed consent (written) was obtained from the in-school adolescents, and it was explained to them how and when the data would be taken. Also, the research team explained the objectives of research for the participants and the latter were assured about the privacy of their personal data. Participants were informed that they could decline participation or withdraw without penalty.After their consent was gotten, the researchers through the Principals and teachers administered 3,000questionnaires to the respondents for completionusing procedures designed to minimize disruption of normal school activities. Participants filled out the questionnaires individually and it was only done once. The administration protocol required that two researchers always be present during the procedures to answer participants' questions and ensure that all steps of the protocol were followed. The questionnaires were collected back immediately after filling out in order to ensure maximum return rate. Of the 3,000 questionnaires administered, 2,940 were adequately completed and included in the analysis, representing a 98.0% usable response rate. The remaining 60 questionnaires (2.0%) were excluded because of incomplete responses. Thus, the final analytical sample was 2,940 in-school adolescents.

Concurrently, the individual in-depth interviews were conducted on 72 participants in locales (English language) convenient to in-school adolescents. Before conducting the interviews, the research team reviewed the semi-structured questions and the ways to obtain valid data and focused on research questions. During the interviews, the data were recorded through note taking and tape-recording. The researchers worked in collaboration with six trained research assistants in execution of the project.

Data analysis

Data were analyzed using IBM SPSS Statistics version 25. Descriptive statistics of frequencies andpercentages were used to summarize participant characteristics and study variables.

The prevalence of peer victimization was calculated as the proportion of respondents who met the study criterion for victimization (50%). A 95% confidence interval was calculated for the prevalence estimate. For this study, respondents were classified as victimized when their MPVS responses met the study's predefined victimization criterion and as not victimized when the criterion was not met. The classification was subsequently coded as a binary outcome (0 = not victimized; 1 = victimized) for prevalence estimation and binary logistic regression. Peer pressure was measured with eight 4-point Likert items, giving a possible score of 8–32. Scores of 8–20 were classified as lower peer pressure, whereas scores of 21–32 were classified as higher peer pressure. Media influence was assessed using nine 4-point Likert items, with possible scores of 9–36. Scores of 9–22 were classified as lower media influence, while scores of 23–36 were classified as higher media influence.

Pearson's chi-square test was used to examine bivariate associations between categorical independent variables and peer victimization. Multivariable binary logistic regression was subsequently performed to determine whether peer pressure and media influence were independently associated with peer victimization after adjustment for relevant sociodemographic variables. Statistical significance was set at $p \leq .05$, and adjusted odds ratios (AORs) with 95% confidence intervals were used to interpret the logistic regression results.

For the qualitative data, the research team reviewed the interviews, and extracted codes and categories to assess the accuracy of the coding process. Transcripts of the recorded in-depth interviews were coded and analysed thematically, using the conventional deductive content analysis approach, in which themes and categories are explored to reveal In-school adolescents'' experiences of peer victimization and the association with peer pressure and media influence. The themes from the edited responses were presented alongside the quantitative data for each research question.

Intervention strategies for addressing peer victimization among in-school adolescents were developed by using the quantitative and qualitative findings, reviewing the related literature on strategies for mitigating and possibly preventing peer victimization, and employing the nominal group technique (NGT) among 30 experts from different disciplines (public health, mental and emotional health, psychology) to increase the variety of views on the discussed topics.

Results

Table 1: **SociodemographicCharacteristics of In-School Adolescents (n= 2,940)**

Variable	**n (%)**
Gender	
Male	1830 (62.2)
Female	1110 (37.8)
Class	
JSS 1	885 (30.1)
JSS2	843 (28.7)
SS 1	408 (13.9)
SS 2	804 (27.3)
School type	
Public	1393 (47.4)
Private	1547 (52.6)
School location	
Urban	1200 (40.8)
Rural	1740 (59.2)
Parental monthly income	
<₦50,000	1217 (41.4)
₦50,000 – ₦99,000	405 (13.8)
₦100, 000 +	1318 (44.8)

Note. JSS = Junior Secondary School; SS = Senior Secondary School

A total of 2,940 in-school adolescents were included in the analysis. As shown in Table 1, 1,830 (62.2%) were male and 1,110 (37.8%) were female. In-school adolescents in JSS 1 and JSS 2

constituted 58.8% of the sample, while students in SS 1 and SS 2 constituted 41.2%. There were 1,393 (47.4%) respondents from public schools and 1,547 (52.6%) from private schools. Rural schools accounted for 59.2% of respondents, compared with 40.8% from urban schools. Regarding parental monthly income, 41.4% reported less than ₦50,000, 13.8% reported ₦50,000–₦99,000, and 44.8% reported ₦100,000 or more.

Table 2: **Prevalence of Peer Victimization among In-School Adolescents (n = 2.940)**

Peer victimization status	**n (%)**	**95%CI**
Peer victimization		
Victimized	2022 (68.8)	67.1 – 70.5
Not victimized	918 (31.2)	29.5 – 32.9
Total	2,940 (100.0)	

Note. CI = confidence interval

As shown in Table 2, 2,022 (68.8%) of the 2,940 respondents met the study criterion for peer victimization, whereas 918 (31.2%) did not. The estimated prevalence was therefore 68.8% (95% CI [67.1%, 70.5%]).

The in-depth interviews supported the quantitative finding that peer victimization was relatively prevalent (common) among in-school adolescents. Participants described teasing, name-calling, insults, exclusion and, in some cases, physical aggression as experiences occurring among students. One participant stated, “Some students are always being laughed at or called bad names by their classmates.” Another explained, “Sometimes they make fun of you because of the way you look or dress.” A third participant noted, “When someone cannot defend himself, other students may continue disturbing or beating the person.” These accounts suggest that peer victimization occurred in different forms and was experienced within everyday school interactions.

Table 3: **Distribution of Peer Pressure and Media Influence among In-school Adolescents**

Variable	**n (%)**
Peer pressure	
Lower	2258 (76.8)
Higher	682 (23.2)
Media influence	
Lower	2197 (74.7)
Higher	743 (25.3)

Table 3 shows that 2,258 (76.8%) respondents had lower peer pressure, whereas 682 (23.2%) had higher peer pressure. Similarly, 2,197 (74.7%) reported lower media influence and 743 (25.3%) reported higher media influence.

The in-depth interviews supported the quantitative findings concerning peer pressure and media influence. Participants explained that adolescents sometimes participated in bullying or teasing because of pressure from friends or the desire to belong. One participant said, “Some students join their friends in bullying because they don't want to be left out.” Another stated, “Even when you don't want to insult somebody, your friends can encourage you to do it.” Regarding media

influence, one participant observed, “Students see people insulting or embarrassing others online and sometimes copy what they see.” Another explained, “Some things they watch on social media make mocking other people look funny.” These responses indicate that peer acceptance and exposure to media content may reinforce behaviours associated with peer victimization.

Table 4: **Bivariate Associations between Peer Pressure, Media Influence and Peer Victimization among In-School Adolescents**

Variable	**Victimized n (%)**	**Not Victimized n (%)**	**χ^2**	**p-value**
Peer pressure				
Lower	1528 (67.7)	730 (32.3)	5.535[A]	0.019*
Higher	494 (72/4)	188 (27.6)		
Media influence				
Lower	1528 (69.5)	669 (30.5)	2.424[A]	0.119
Higher	494 (66.5)	249 (33.5)		

Table 4 shows a statistically significant association between peer pressure and peer victimization, $\chi^2(1) = 5.535$, $p = .019$. Among adolescents with higher peer pressure, 72.4% experienced peer victimization, compared with 67.7% among those with lower peer pressure. In contrast, media influence was not significantly associated with peer victimization, $\chi^2(1) = 2.424$, $p = .119$. Peer victimization was reported by 69.5% of adolescents with lower media influence and 66.5% of those with higher media influence.

Table 5: **Multivariable Logistic Regression Analysis of Peer Pressure and Media Influence Associated with Peer Victimization among In-School Adolescents**

Variable	**AOR**	**95%CI**	**p-value**
Peer pressure			
Lower	1.00	Reference	
Higher	1.072	.874 – 1.314	.507
Media influence			
Lower	1.00	Reference	
Higher	.845	.688 – 1.037	.106
Gender			
Male	1.00	Reference	
Female	.937	.771 – 1.139	.514
Class			
JSS 1	1.00	Reference	
JSS2	.362	.282 - .464	p<0.001
SS 1	.380	.282 - .513	p<0.001
SS 2	.308	.240 - .395	p<0.001
School type			
Public	1.00	Reference	
Private	.348	.281 - .431	p<0.001
School location			
Urban	1.00	Reference	
Rural	2.119	1.664 – 2.698	p<0.001

Parental income			
<₦50,000	1.00	Reference	
₦50,000 – ₦99,000	1.613	1.186 – 2.192	.002
₦100, 000 +	.570	.463 - .702	p<0.001
Constant	6.510		p<0.001

Model χ^2 = 349.425, p<0.001 , Nagelkerke R^2 = .158

The multivariable logistic regression model was statistically significant overall, $\chi^2 = 349.425$, $p < .001$, with a Nagelkerke R^2 of 0.158, indicating that the predictors collectively explained approximately 15.8 of the variance in peer victimization.

After adjustment for gender, academic class, school type, school location, and parental income, neither peer pressure nor media influence was independently associated with peer victimization. Respondents with higher peer pressure had 1.072 times the odds of peer victimization compared with those with lower peer pressure, but the confidence interval included 1.00 and the association was not statistically significant (AOR = 1.072, 95% CI [0.874, 1.314], p = .507). Similarly, adolescents with higher media influence had lower estimated odds of peer victimization than those with lower media influence, but the association was not statistically significant (AOR = 0.845, 95% CI [0.688, 1.037], p = .106).

Several sociodemographic variables were independently associated with peer victimization. Compared with JSS 1 students, students in JSS 2, SS 1, and SS 2 had significantly lower adjusted odds of victimization. Students attending private schools also had lower adjusted odds than those attending public schools. Rural school location was associated with higher odds of peer victimization compared with urban school location. Parental income also showed a graded association: adolescents from households earning ₦50,000–₦99,000 had higher odds compared with those from households earning less than ₦50,000, whereas those from households earning at least ₦100,000 had lower odds.

Table 6: **Experts' Responses on Intervention Strategies for Peer Victimization among In-school Adolescents in Imo State (n=30)**

S/n	Proposed intervention strategies	n (%)
1.	School counsellors to provide regular anti-victimization counselling for in-school adolescents to improve coping and help-seeking skills.	30 (100.0)
2.	Teachers to conduct peer-pressure management sessions for students to reduce negative peer influence that may contribute to peer victimization.	30 (100.0)
3.	Health educators to provide media-literacy education for adolescents to help them recognize and reject harmful media content.	29 (96.7)
4.	School administrators to strengthen classroom anti-bullying rules for students to create a safe and respectful learning environment.	30 (100.0)
5.	Teachers to promote supportive classroom interactions among adolescents to reduce behaviours that facilitate peer victimization.	28 (93.3)
6.	School counsellors to provide self-esteem enhancement programmes for victimized and vulnerable students to strengthen confidence and resilience	29 (96.7)
7.	Parents and teachers to provide psychosocial support for adolescents experiencing peer victimization to encourage early disclosure and help-seeking.	30 (100.0)

8.	Peer educators to promote positive peer relationships among students to discourage peer pressure and victimization.	29 (96.7)
9.	School health personnel to establish confidential reporting and referral services for students experiencing peer victimization to ensure timely support.	28 (93.3)
10	School administrators to provide inclusive extracurricular activities for students to promote positive peer interaction and reduce victimization.	26 (86.7)
11	School administrators, teachers and counsellors to implement coordinated anti-victimization programmes for all students to reduce peer victimization in schools.	29 (96.7)

Table 6 indicates high levels of expert agreement with endorsement of the proposed intervention strategies, with endorsement ranging from 86.7% to 100.0%. Five strategies received complete endorsement (100.0%),while the remaining strategies were endorsed by at least 86.7% of the experts. This indicates strong consensus among the experts regarding the relevance and applicability of the proposed strategies for addressing peer victimization among in-school adolescents.

Discussion

This study found that more than half of the surveyed in-school adolescents met the criterion for peer victimization (Table 2). This represents a substantial burden within the study population and supports the characterization of peer victimization as an important school-health and adolescent public health issue. The finding is consistent with the broader international evidence that bullying and peer violence remain common experiences among adolescents (United Nations Educational Scientific and Cultural organization [UNESCO], 2019; WHO Regional Office for Europe, 2024). Also, recent meta-analyses have reported considerable variation in prevalence across countries and populations, with higher vulnerability associated with several individual, socioeconomic, peer, and school-related factors (Ariani et al., 2025; Biswas et al., 2021; Rtbey et al., 2025). The prevalence observed in this study was higher than the 51.9% reported among in-school adolescents in Edo State by Ighaede-Edwards et al. (2023). It was also higher than the approximately 43% reported among adolescents in a Nigerian study conducted in Kano State (Duru et al., 2017). The higher burden observed in this study may reflect differences in social, educational, and socioeconomic contexts, as well as differences in measurement and classification of victimization. Such differences should be interpreted cautiously. Peer victimization prevalence can vary according to the operational definition of victimization, measurement instrument, recall period, school setting, age distribution, sampling procedure, and geographical context. In this study, the relatively large sample drawn from multiple LGAs may have captured a wider range of school and community environments than studies restricted to individual cities.

The high prevalence is nevertheless concerning from a public health perspective. School violence can adversely affect physical and mental health and may also interfere with school attendance, learning, and social development. The WHO emphasizes that childhood exposure to violence can have long-term health and educational consequences, while schools represent an important setting for prevention and early response (WHO, 2019).

At the bivariate level, higher peer pressure was significantly associated with peer victimization. Victimization occurred among 72.4% of adolescents with higher peer pressure compared with 67.7% of those with lower peer pressure (Table 4). This finding is compatible with evidence emphasizing the importance of peer relationships in adolescent experiences of victimization. However, the association disappeared after adjustment for sociodemographic variables. This suggests that the crude association may partly reflect differences in class, school type, school location, parental income, or other characteristics associated with both peer pressure and victimization.A significant chi-square result does not establish that peer pressure independently predicts victimization. The adjusted model showed that the evidence was insufficient to conclude that higher peer pressure was independently associated with peer victimization in this population. Rather than interpreting the finding as evidence that peer pressure has no relevance whatsoever, future studies should examine specific dimensions of peer relationships, including positive peer support, negative peer norms, friendship quality, peer group structure, and exposure to aggressive peers.

Media influence was not significantly associated with peer victimization in either the bivariate or adjusted analysis (Table 4). At the bivariate level, victimization was actually somewhat more common among respondents with lower media influence than among those with higher media influence. The adjusted association remained statistically non significant. This finding cautions against assuming a simple direct relationship between media exposure and school victimization. Recent Nigerian research has reported associations between antisocial media exposure and school-based victimization, but such relationships may operate through complex pathways involving teacher victimization, peer processes, and individual or contextual characteristics. Differences between that evidence and this finding may reflect differences in how media exposure is conceptualized and measured.

Reviews have identified internet and social-media engagement among factors associated with bullying victimization, but substantial heterogeneity exists across studies and forms of media exposure. The absence of an independent association in this study may therefore reflect the specific nature of the media-influence construct assessed rather than indicating that adolescents' media environments are irrelevant to victimization.

Peer pressure was significantly associated with peer victimization before adjustment but was not independently associated after adjustment. This suggests that the initial relationship may have been influenced by other characteristics of the adolescents or their school environments. Although peers are central to adolescent social development, peer influence is context-dependent and does not necessarily translate directly into victimization. Longitudinal evidence indicates that peer influence varies according to the behaviour, relationship context, and characteristics of the peer group (Laursen & Veenstra, 2021). Evidence also suggests that social problems and previous victimization may be more consistent predictors of subsequent victimization than general peer influence alone (Zych et al., 2019).

The multivariable analysis identified academic class as an important factor. Compared with JSS 1 students, adolescents in JSS 2, SS 1, and SS 2 had substantially lower adjusted odds of peer victimization. This pattern is consistent with Nigerian evidence showing greater vulnerability to bullying among students in junior classes compared with students in senior classes (Ighaede-Edwards et al., 2023). Several explanations are possible, including developmental differences,

length of exposure to the school environment, social maturity, peer-network development, and differences in power relationships between younger and older students. Because this study is cross-sectional, these possible explanations require further investigation rather than causal interpretation.

The absence of a statistically significant gender association in the adjusted model is also noteworthy. Female adolescents had slightly lower adjusted odds than males, but the confidence interval crossed 1.00 and the association was not statistically significant. This finding does not mean that boys and girls necessarily experience identical forms of victimization. Research on peer victimization has consistently indicated that the pattern of victimization can differ by sex, with direct physical victimization and relational forms sometimes showing different distributions. The MPVS itself was designed to capture multiple forms of victimization, making multidimensional assessment important (Mynard & Joseph, 2000; Joseph & Stockton, 2018). Although international evidence has found gender differences in victimization, with boys generally reporting higher levels of frequent victimization, these differences vary considerably across countries and forms of victimization (Biswas et al., 2021). The lack of an independent gender association in this study suggests that other contextual characteristics may be more important in explaining differences in victimization within this population (Table 5).

Class level was independently associated with peer victimization, with younger students showing greater vulnerability than students in more senior classes. This finding is consistent with multinational evidence identifying younger age as a correlate of bullying victimization and with longitudinal research identifying age among factors that may influence adolescents' involvement in bullying (Biswas et al., 2020; Zych et al., 2019). Younger students may have less established peer networks and fewer social resources for managing hostile peer interactions. The finding therefore supports early identification and prevention during the transition into secondary school.

School type was independently associated with peer victimization, with higher odds observed among students in public schools. School ownership itself should not be regarded as the causal explanation. Rather, public and private schools may differ in school climate, student composition, class organization, supervision, resources, and implementation of behavioural and safeguarding policies. Research consistently indicates that school-level conditions and the broader school environment are relevant to bullying experiences. Importantly, evidence from school-based intervention research shows that comprehensive programmers can reduce both bullying and victimization, supporting the importance of strengthening school-level prevention systems rather than focusing only on individual students (Gaffney et al., 2021). In-school adolescents attending private schools had lower adjusted odds of victimization than those attending public schools. Similar school-type differences have been observed in some Nigerian studies, although findings across settings are not necessarily consistent. The difference may reflect variations in class size, school supervision, school resources, disciplinary structures, student composition, reporting systems, or socioeconomic characteristics. Importantly, school type itself should not be considered a causal explanation without further investigation of these underlying characteristics.

School location was also independently associated with peer victimization, with greater vulnerability observed among adolescents attending rural schools. This finding should be interpreted as a contextual association rather than evidence that rural location itself causes

victimization. Rural and urban schools may differ in staffing, supervision, infrastructure, access to counselling, student-support services, and community resources. Evidence on geographical differences in bullying is not uniform, suggesting that the mechanisms underlying this finding may be specific to the educational and social context of Imo State. Consequently, rural schools may benefit from targeted assessment of school climate, supervision and student-support capacity rather than assuming that location alone accounts for the observed difference. This finding is consistent with evidence that social and environmental characteristics of rural and urban schools can influence adolescents' exposure to bullying and other forms of violence. However, the mechanisms responsible for the association cannot be established from the current cross-sectional data. Differences in school resources, supervision, community conditions, access to counselling, class size, transportation, and reporting mechanisms could potentially contribute.

Parental income was independently associated with peer victimization, although the pattern across income categories was not strictly linear. Previous meta-analytic evidence has found a relationship between socioeconomic disadvantage and bullying victimization, while emphasizing that the association is relatively modest and that socioeconomic status alone is insufficient for identifying adolescents at risk (Tippett & Wolke, 2014). More recent evidence similarly suggests that socioeconomic disadvantage may influence bullying through multiple pathways involving family circumstances, social relationships, and access to resources (Runions et al., 2025). The non-linear pattern observed in this study therefore warrants cautious interpretation and may reflect unmeasured differences in family, school, or peer environments.The independent associations with class level, school type, school location, and parental income support the need for context-sensitive prevention. This is consistent with evidence showing that comprehensive school-based anti-bullying programmes can reduce victimization and that effective prevention requires attention to the wider school environment rather than isolated individual-level interventions (Gaffney et al., 2021).

The high level of expert agreement on the proposed strategies supports a multilevel, whole-school approach to reducing peer victimization among in-school adolescents (Table 6). The emphasis on counselling, positive peer relationships, classroom management, teacher involvement, parental participation, media literacy, confidential reporting and referral is consistent with WHO and UNESCO recommendations for comprehensive school-based violence prevention (UNESCO, 2019; WHO, 2019). Evidence from a systematic review and meta-analysis also indicates that school-based anti-bullying programmes can reduce both bullying perpetration and victimization, although effectiveness varies according to programme components and implementation (Gaffney et al., 2021). Thus, the validated strategies provide a practical framework for combining prevention, early identification, psychosocial support and referral within the school environment.

The findings have important implications for school health practice. First, the high prevalence indicates that peer victimization should be incorporated into routine school-health and adolescent-wellness programmes. Second, prevention should not focus exclusively on changing individual students or controlling peer pressure. The independent associations with academic class, school type, school location, and parental income suggest that school and social contexts should be incorporated into prevention planning. Third, school personnel need confidential mechanisms through which in-school adolescents can report victimization and obtain appropriate support.

A major strength of the study is its relatively large sample of 2,940 in-school adolescents. The inclusion of schools across 21 LGAs and different education zones increases the geographical coverage of the study within Imo State. The use of a multidimensional peer-victimization measure and the assessment of peer pressure and media influence provide a broader assessment of adolescent social experiences than a single-item bullying question. The study also combined bivariate and multivariable analyses, allowing potentially important sociodemographic factors to be considered when examining the independent associations of peer pressure and media influence.

The study was limited by the cross-sectional design which prevents determination of temporal sequence and causality. For example, it cannot be established whether peer pressure preceded victimization or whether experiences of victimization influenced adolescents' peer relationships. Second, the qualitative findings may not be fully transferable to all in-school adolescents.Third, the study focused on in-school adolescents and therefore does not represent adolescents who are out of school.

Conclusion

Peer victimization was highly prevalent among the in-school adolescents surveyed in Imo State, with more than two-thirds meeting the study criterion for victimization. Peer pressure showed a significant crude association with victimization, but neither peer pressure nor media influence remained statistically significant after adjustment for sociodemographic characteristics. Academic class, school type, school location, and parental income were independently associated with peer victimization. The findings indicate that peer victimization should be approached as a multifactorial school-health and public health concern. Effective prevention should combine student-focused education with supportive peer environments, teacher capacity building, confidential reporting systems, family engagement, and improvements in school safety, particularly in settings identified as having greater contextual vulnerability.

Recommendations

1. School administrators and counsellors should prioritize younger students, particularly those entering secondary school, for early identification, counselling, and peer-victimization prevention.

2. Imo State Ministry of Education and secondary school authorities should establish or strengthen comprehensive school anti-bullying policies and confidential reporting mechanisms to reduce peer victimization and ensure timely identification and response to affected students.

3. School principals and teachers, particularly in rural schools, should implement structured supervision, positive-discipline practices, and school-based violence-prevention programmes to create safer learning environments.

4. Parents and parent–teacher associations should strengthen communication with adolescents and schools to facilitate early recognition and reporting of victimization and to promote supportive peer relationships.

5. Imo State Ministry of Education and school administrators should prioritize younger secondary-school students for preventive education and peer-support programmes because the adjusted analysis identified substantially higher odds of victimization among JSS 1 students.

8. School authorities should implement targeted peer victimization prevention programmes for in-school adolescents to promote safer and more supportive school environments.

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