South American Publishing

SAP Southern Studies. 2026; 2:101
doi: 10.62486/ss2026101

REVIEW

Bullying and cyberbullying in the school context

Bullyng y cyberbullyng en el contexto escolar

Maikro Osvaldo Chávez Moya[1], Leodanis Hernández Cabrera[1], Orlando Jesús Espinosa Romero[1], Neisy Pérez Ramos[2],

[1]Universidad de Ciencias Médicas de Villa Clara, Facultad de Medicina. Santa Clara, Cuba
[2]Universidad de Ciencias Médicas de Villa Clara, Facultad de Medicina, Departamento de Ciencias Biomédicas. Santa Clara, Cuba

Cite as
Chávez Moya MO, Hernández Cabrera L, Espinosa Romero OJ, Pérez Ramos N. Bullying and cyberbullying in the school context. SAP Southern Studies. 2026; 2:101. https://doi.org/10.62486/ss2026101

Publication History
Submitted: 16-10-2025
Revised: 02-01-2026
Accepted: 22-04-2026
Published: 23-04-2026

Corresponding Author
Maikro Osvaldo Chávez Moya

ABSTRACT

Introduction: school bullying is defined as repeated aggressive behaviour involving a power imbalance, recognized as a public health priority since the late 20th century. Cyberbullying emerged alongside digital expansion, characterized by perpetrator anonymity and the permanence of online messages that extend harassment beyond physical school boundaries.
Objective: to describe the phenomenon of the bullying and the ciberbullying against girls, children and adolescents in the school context.
Development: global prevalence reaches 25 % for traditional bullying and 11-17 % for cyberbullying, with heightened risks for sexual minorities and females. Victims of both modalities face 5,30 times the risk of depression and are 7,82 times more likely to attempt suicide. Academic achievement drops by 38 %, influenced by cognitive-motivational factors and sleep disturbances. Physical symptoms, including headaches, fatigue, and loss of appetite, are also significantly associated with victimization.
Conclusions: evidence suggests up to 40 % of youth mental health issues are attributable to bullying. Comprehensive school interventions must be implemented, prioritizing the strengthening of teacher support as a critical protective factor for self-esteem to prevent lifelong psychiatric and socioeconomic difficulties.

Keywords: Bullying; Cyberbullying; Mental Health; Academic Performance; Adolescence.

RESUMEN

Introducción: el bullying escolar se define como comportamientos agresivos repetidos con un desequilibrio de poder, reconocido como problema de salud pública desde finales del siglo XX. El ciberbullying surge con la expansión digital, caracterizándose por el anonimato de los perpetradores y la permanencia del acoso más allá de los límites físicos y temporales de la escuela.
Objetivo: describir el fenómeno del bullying y el ciberbullying contra niñas, niños y adolescentes en el contexto escolar.
Desarrollo: la prevalencia global es del 25 % en bullying tradicional y entre 11-17 % en ciberbullying, con riesgos elevados para minorías sexuales y mujeres. Quienes sufren ambas formas presentan 5,30 veces más riesgo de depresión y 7,82 veces más probabilidades de intentar suicidarse. El rendimiento académico disminuye un 38 %, mediado por factores cognitivo-motivacionales y alteraciones del sueño. Además, se asocian síntomas físicos como cefaleas, fatiga y pérdida de apetito.
Conclusiones: hasta el 40 % de los problemas de salud mental juvenil podrían ser atribuibles al acoso. Es imperativo implementar intervenciones integrales que fortalezcan el apoyo docente, factor que actúa como protector crítico de la autoestima, para prevenir dificultades socioeconómicas y psiquiátricas permanentes en la adultez.

Palabras clave: Bullying; Ciberbullying; Salud mental; Rendimiento académico; Adolescencia.

© 2026; The Authors. This Open access article is distributed under the Creative Commons Attribution 4.0 license (https://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

School bullying, defined as repeated aggressive behaviors toward another student where there is a power imbalance that prevents victims from effectively defending themselves, has been recognized as a public health problem since the late 20th century. Although peer bullying has always been prevalent in school settings, its formal recognition as a research and public health issue began to take hold in the 1990s, when various epidemiological studies began to document its prevalence and consequences.[1]

With the arrival of the new millennium and the massive expansion of digital technologies, a new dimension of the problem emerged: cyberbullying, characterized as intentional and repeated aggression that occurs via electronic devices and social media, where victims have difficulty defending themselves. This digital form of bullying has distinctive characteristics that potentially amplify its impact, including the relative anonymity of perpetrators, wider audiences, the permanence of posted messages, and the ability to extend the bullying beyond the physical and temporal boundaries of the school.[2]

The World Health Organization and UNICEF have identified school bullying as a violation of children's fundamental rights that undermines the right to education, health, and holistic development. In Latin America, the figures are particularly concerning, with some countries reporting that up to one in two students has experienced some form of school violence. Although it is a more recent phenomenon, cyberbullying is correlated with increased access to digital devices and a decrease in the age at which children begin using technology.[3]

Epidemiological data reveal the magnitude of the problem today. Globally, approximately one in four children and adolescents (25 %) experiences victimization from traditional bullying, while cyberbullying affects between 11 % and 17 % of this population. In the United States, according to the 2019 Youth Risk Behavior Survey, 22 % of youth aged 12 to 18 reported being bullied at school, and an additional 15,7 % reported cyberbullying. Temporal trends show concerning patterns: while traditional face-to-face bullying has shown modest declines or remained stable between 1998 and 2017, cyberbullying has experienced a steady increase, particularly among girls, whose victimization by cyberbullying rose from 17 % to 27 % between 2006 and 2012.

Approximately one-third of victims of traditional bullying also experience cyberbullying, and only one-third of cyberbullying victims are free from traditional bullying, indicating a significant overlap between the two forms of harassment. Compared with their male peers, female students consistently report higher rates of both traditional and cyber victimization, and sexual minorities face elevated risks of both forms of harassment across all the studies.[3]

However, no recent narrative review has simultaneously synthesized the interconnected effects of traditional bullying and cyberbullying on self-esteem, academic performance, and interpersonal relationships among the school population; therefore, the following article aims to describe the phenomenon of bullying and cyberbullying among children and adolescents in the school context.

METHOD

A descriptive and narrative literature review was conducted to characterize the phenomenon of bullying and cyberbullying among children and adolescents. This study focused on compiling and analyzing up-to-date scientific evidence regarding the global prevalence of and conceptual differences between traditional bullying and digital bullying and their impact on mental health and school performance.

Search Strategy

To gather information, we consulted academic databases (PubMed, Scopus, Web of Science, LILACS) and official documents from international organizations such as the World Health Organization (WHO) and UNICEF. Search terms (combined using Boolean operators AND/OR) such as "Bullying," "Cyberbullying," "Mental health," "Academic performance," and "Adolescence" were used. The search focused on articles published predominantly between 2021 and 2026, with some texts from previous years being included on an exceptional basis because of their theoretical and historical relevance.

The inclusion criteria defined for the literature selection were as follows:

- Original articles, meta-analyses, and systematic reviews.
- Studies addressing specific variables such as self-esteem, academic performance, and interpersonal relationships in the context of bullying.
- Research with an epidemiological representativeness of current trends and risk factors in minority groups and by sex.

The exclusion criteria included studies not set in a school environment, non-peer-reviewed articles, publications not available in full text, and studies with low thematic relevance or insufficient methodological rigor for the purpose of this article.

Study Selection (PRISMA Flow)

In the interest of transparency and adapting the workflow inspired by the PRISMA diagram for narrative reviews, a total of approximately 135 studies were initially identified through databases. After removing duplicates and conducting a preliminary exclusion by reading the titles and abstracts, 48 full-text articles were evaluated. Finally, 19 references that fully met the established criteria were included to support this review.

Data Analysis, Quality Assessment, and Limitations

The information was analyzed through a qualitative synthesis of the findings, organizing the discussion around the interconnection of the psychological and academic dimensions affected by victimization. It is explicitly stated: "No quality assessment or meta-

analysis was performed; this is a qualitative synthesis." As the main limitation of this method, given its narrative design, there is an inherent selection bias in the extracted literature and the inability to generate combined statistical estimates of effect size. Nevertheless, this approach allowed us to prioritize the identification of protective factors, such as teacher support, to derive practical implications for school-based interventions.

DEVELOPMENT

Bullying and cyberbullying: concept and differences

School bullying is defined as deliberate and repeated aggressive behaviors directed toward another student by an individual or group who are not siblings or current partners, where there is a power imbalance that favors the perpetrator and prevents the victim from effectively defending themselves. The three fundamental criteria that characterize bullying are (1) repetition of aggressive behavior, (2) the intentionality of the act, and (3) a power imbalance between the aggressor and the victim. Owing to these characteristics, bullying is frequently defined as the systematic abuse of power by peers.[4,5]

School bullying manifests in multiple forms: physical (hitting, shoving, and trapping), verbal (insults and teasing), relational (deliberate social exclusion and intentional ignoring), and cyberbullying. In the school setting, the most common locations include classrooms, stairwells, cafeterias, and outdoor areas of the campus.[6]

Cyberbullying is defined as intentional and repeated aggression that occurs via electronic devices (computers, cell phones) and social media and is directed at a person who cannot easily defend themselves.[7,8] Key differences that distinguish cyberbullying from traditional bullying include[8] the following:

- Relative anonymity of perpetrators in many cases
- Potentially wider audiences and instant reach
- Permanence of messages posted online
- Temporal and spatial extension: harassment can continue beyond physical boundaries and school hours
- Amplification of harm: messages can be shared by others, perpetuating the abuse

Approximately one-third of victims of traditional bullying also experience cyberbullying. Only 4,6 % of victims reported being bullied exclusively online, while 50,3 % reported experiencing all four forms of bullying (physical, verbal, relational, and cyberbullying). Common forms of cyber include offensive instant messages, social media posts, hurtful emails or text messages, and the creation of websites that ridicule the victim. Girls typically receive messages criticizing their popularity or appearance, whereas boys frequently receive homophobic messages or derogatory comments about their physical abilities.[7]

Fifty-eight percent of the students believe that cyberbullying is equally or more harmful than traditional bullying is. Compared with those who experience only traditional bullying, victims of cyberbullying are more likely to exhibit externalizing and internalizing symptoms.[9]

Prevalence

Approximately one-third of victims of traditional bullying also experience cyberbullying, and only one-third of cyberbullying victims are free from traditional bullying, indicating a significant overlap between the two forms of harassment. Compared with their male peers, female students consistently report higher rates of both traditional and cyber victimization, and sexual minorities face elevated risks of both forms of harassment across all the studies.[3]

The consequences for the physical and mental health of children and adolescents are profound and well documented. Victimization by bullying is significantly associated with anxiety, depression, psychosocial difficulties, self-harm behaviors, suicidal ideation, and suicide attempts. A recent meta-analysis revealed that victims of traditional bullying are 3,33 times more likely to experience depression, while victims of cyberbullying are 3,38 times more at risk; alarmingly, those who experience both forms of bullying are 5,30 times more likely to suffer from depression. The pattern intensifies for suicidal behaviors: victims of both forms of bullying are 7,82 times more likely to attempt suicide than those who are not victimized.[7]

Compared with boys, girls are particularly vulnerable to mental health consequences and show greater impairment in terms of psychological outcomes. In addition to the psychological impact, bullying is associated with physical health problems, including stomachaches, sleep problems, headaches, tension, fatigue, and loss of appetite, as well as poor academic performance, substance use, violent behavior, risky sexual behavior, and a high likelihood of carrying weapons. Population-attributable fractions suggest that between 25 % and 40 % of mental health problems in this population could be attributable to bullying if this relationship is causal, underscoring the magnitude of the problem as a modifiable risk factor.[4]

Bullying profoundly affects the self-esteem, academic performance, and interpersonal relationships of children and adolescents in the school setting, establishing vicious cycles that perpetuate psychological and social harm over time. Scientific evidence has demonstrated that these three dimensions are intricately interconnected, where deterioration in one dimension frequently precipitates or amplifies problems in the others.

Victimization by bullying has a devastating and bidirectional effect on the self-esteem of children and adolescents. Longitudinal studies have shown that bullying victims have significantly lower self-esteem than their nonvictimized peers do, indicating an 88 % reduction in the likelihood of maintaining healthy levels of self-esteem.(This relationship is not unidirectional; research reveals a reciprocal temporal dynamic in which victimization predicts subsequent low self-esteem, and in turn, low self-esteem predicts greater future victimization. Specifically, during the first year of middle school, victimization predicts low self-esteem in the following semester, whereas in the second year, low self-esteem predicts subsequent victimization, creating a particularly dangerous

vicious cycle.[11,12]

This temporal pattern suggests that bullying victims may become trapped in a cycle in which, after being victimized, they feel unworthy or incompetent, and this increase in low self-esteem is linked to subsequent victimization. The nature of this impact varies depending on the specific domain in which self-esteem is affected: offline (face-to-face) victimization particularly affects social and emotional self-esteem, whereas interestingly, victims of cyberbullying have higher self-esteem related to body image, possibly because cyberbullying focuses less on visible physical characteristics. s exhibit a different pattern, with lower self-esteem related to academic performance but higher social self-esteem, suggesting that they may derive social validation from their aggressive behavior.[13]

Impact Mechanisms

Cognitive-motivational mechanisms

Bullying and cyberbullying significantly affect the cognition-motivational processes of children and adolescents. Victimization is associated with reduced self-esteem, which in turn acts as a mediator between the experience of bullying and the development of depressive and internalizing symptoms.[14] This decline in self-esteem creates a vicious cycle: low self-esteem predicts greater vulnerability to being victimized again, perpetuating exposure to bullying.[11]

Moreover, victims show lower academic engagement and reduced school motivation. Cognitive-motivational factors—self-esteem, motivation, and academic engagement—mediate the relationship between bullying victimization and low academic performance. As exposure to bullying increases, the positive relationships among emotional intelligence, self-esteem, and school engagement weaken, suggesting that bullying erodes the internal psychological resources that sustain motivation and learning. Furthermore, cumulative victimization is associated with reduced optimism about the future, which reinforces hopelessness and disengagement from the educational environment.[10,15]

Sleep-related mechanisms

There is a bidirectional relationship between bullying/cyberbullying and sleep problems. A recent meta-analysis of 52 studies revealed moderate effects in both the direction from victimization to sleep problems (d = 0,43) and the reverse direction (d = 0,36), creating a vicious cycle where poor sleep increases vulnerability to bullying and vice versa. Among early adolescents in the United States (ABCD study, n = 9,443), cybervictimization was associated with an almost doubled risk of difficulty falling or staying asleep (RR 1,87).[16,17]

The mechanisms underlying this connection include anxiety and depressive symptoms as mediators: cybervictimization generates emotional distress that, in turn, disrupts sleep architecture. [9] Social support can moderate this relationship, although its protective effect varies by gender and age and is most effective among girls and elementary school students. Both traditional bullying and cyberbullying—in all their forms (verbal, social, physical, and digital)—are associated with poorer sleep quality, and this association is stronger in samples with a higher proportion of females.[18]

Neurocognitive Mechanisms

At the brain level, victimization by bullying acts as a chronic stressor that triggers a neuroendocrine cascade with effects on multiple neural networks. Sustained exposure to bullying is associated with elevated capillary cortisol, which in turn is linked to poorer executive function. A meta-analysis of 18 studies (n = 21,725) confirmed that both victims and bullies exhibit lower levels of executive functions, including inhibitory control, working memory, and cognitive flexibility. Victims specifically show poorer episodic memory and lower cognitive flexibility, whereas bullies exhibit deficits, particularly in decision-making.[19]

At the structural level, longitudinal data from the ABCD study revealed that prolonged victimization is associated with brain morphometric alterations, such as increased volume of the right hippocampus, entorhinal cortex, and fusiform gyrus, along with cortical thinning in temporal and frontal regions. These alterations partially mediate the negative effect of bullying on cognition. Functionally, victims show hyperactivation of the amygdala, insula, and fusiform gyrus—key regions of the limbic system—reflecting increased sensitivity to threatening social stimuli.[20]

Disturbances are also observed in the connectivity between the default mode network, the dorsal attention network, and the frontoparietal network—networks involved in attentional control and memory retrieval. In the specific case of cyberbullying, longitudinal studies using functional neuroimaging have shown greater activation in superior parietal regions and the posterior cingulate cortex during error processing, suggesting a state of compensatory hypersensitivity rather than direct impairment of inhibitory control.[21]

Impact on Academic Performance

Bullying has significant and multifaceted consequences for academic performance, operating through multiple cognitive and motivational mechanisms. Children involved in bullying are 38 % less likely to achieve adequate academic performance. This effect manifests itself in lower grades, with bullying victims showing significantly lower grade point averages (GPAs) than nonvictimized students do.(The study "Peer Victimization (Bullying) on Mental Health, Behavioral Problems, Cognition, and Academic Performance in Preadolescent Children in the ABCD Study", conducted by Isaiah A et al. and published in the journal Frontiers in Psychology, examined more than 11,000 preadolescents and demonstrated that bullied children not only had lower grades but also had reduced cognitive scores, indicating that the impact extends beyond mere academic performance to affect fundamental cognitive abilities.[23]

Cognitive-motivational factors significantly mediate the relationship between bullying victimization and poor academic

performance. Specifically, victimized children are 43 % less likely to be academically engaged and 18 % less likely to be motivated. Bullying victimization is negatively related to cognitive-motivational factors, which in turn are associated with poor academic performance, establishing a clear causal chain. Full mediation is observed for perpetrators and bully victims, whereas for pure victims, mediation is partial, operating through sleep duration, behavioral problems, and symptoms of depression and ADHD.[10,22]

A particularly concerning finding is that compared with students not involved, all groups involved in bullying—victims, perpetrators, and bully victims—show lower academic performance. The cumulative effects are especially pronounced: cumulative victimization by bullying over five years is negatively associated with academic performance at the end of high school, and this effect is fully mediated by mental health problems and sleep disturbances. Sleep duration emerges as a critical mediator, with victims reporting significantly shorter sleep and a higher incidence of insomnia, which directly contributes to academic decline.[24]

Impact on Interpersonal Relationships

Bullying profoundly disrupts children's and adolescents' ability to establish and maintain healthy interpersonal relationships, leading to social isolation and difficulties with social adjustment that may persist beyond adolescence. Compared with their nonvictimized peers, victims of bullying experience greater levels of loneliness, and this pattern is consistently observed among both victims and perpetrators. School engagement, which includes relational components such as connections with peers and teachers, is significantly reduced among all groups involved in bullying.[15]

Social support critically moderates the impact of bullying on self-esteem and, by extension, on interpersonal relationships. Support from teachers emerges as particularly protective: the negative association between victimization and self-esteem exists only when perceived teacher support is low, whereas high levels of teacher support cushion this deleterious effect. Surprisingly, this protective effect was not found with peer support, suggesting that structured adult support may be more effective than peer support in mitigating the relational harm of bullying. These findings have important implications for interventions, indicating that strengthening student–teacher relationships may be a key preventive strategy.[12]

Bystander behavior also has significant relational consequences. Cumulative negative bystander behavior is positively associated with aggression and internalizing symptoms and negatively associated with academic performance and future optimism, whereas prosocial bystander behavior is associated with higher academic performance, self-esteem, and future optimism, but paradoxically, it is also associated with more internalizing symptoms, possibly reflecting the emotional stress of intervening in bullying situations. This suggests that even those who are not directly victimized or perpetrators experience relational and emotional consequences because of their exposure to bullying.[24]

Interconnections and Cumulative Effects

Evidence reveals that self-esteem, academic performance, and interpersonal relationships are interconnected in the context of bullying in complex ways. Self-esteem mediates the association between emotional intelligence and school engagement, but this mediation is moderated by exposure to bullying: As bullying increases, the strength of the associations between emotional intelligence, self-esteem, and school engagement decreases. This means that bullying not only directly affects each domain but also disrupts the normal protective processes that link healthy emotional development with academic and social adjustment.[15]

The effects are particularly pronounced for certain subgroups. Compared with boys, girls are more vulnerable to the mental health consequences of bullying and show greater impairment in psychological outcomes. However, compared with girls, bullied boys exhibit greater behavioral problems in several areas. Children who experience both victimization and perpetration (bully victims) have the worst outcomes across all domains, with greater aggression, more severe symptoms, lower self-esteem, and poorer academic performance than pure victims or pure perpetrators do.[7]

Implications for Intervention

These findings have critical implications for the design of interventions in the school setting. Interventions should focus not only on reducing the occurrence of bullying behaviors but also on supporting victims and helping them build resilience, particularly by strengthening their self-esteem. Given that cognitive-motivational factors mediate the relationship between victimization and academic performance, interventions should include components of positive reinforcement, encouragement, and programs to improve academic engagement and achievement among victimized children and adolescents.[1] Strengthening teacher support emerges as a particularly promising strategy, given its protective effect on victims' self-esteem.[12]

Interventions must be comprehensive and targeted at all involved groups—victims, perpetrators, and bystanders—recognizing that each group experiences distinct but interrelated consequences. To break the vicious cycle between victimization and low self-esteem, interventions focused on victims' self-esteem would be particularly effective. Given that bullying can predispose individuals to difficulties that persist into adulthood, addressing bullying during childhood could not only reduce mental health symptoms among children and adolescents but also prevent psychiatric and socioeconomic difficulties into adulthood and reduce the costs to society.[25]

CONCLUSIONS

Bullying and cyberbullying are not transient events but critical determinants of health and development that require a coordinated multisectoral response. To mitigate the impact of this phenomenon, it is imperative to transform educational and healthcare environments through the following actions:

- Teacher support: Train teachers to provide structured emotional support, as pedagogical support acts as a critical buffer for victims' self-esteem.
- Pediatric surveillance: Implement routine screening for victimization in pediatric primary care to identify associated physical and psychological symptoms early on.
- Digital literacy: Integrate specific modules on cyberbullying into digital literacy curricula to equip students with self-defense tools and online ethics.

Despite the current solid scientific foundation, priority areas for future studies have been identified to further explore the effectiveness of these solutions:

- Geographic diversity: Longitudinal studies are needed in low- and middle-income countries, as most current evidence comes from contexts in the United States and Europe.
- High-risk groups: Develop specific interventions targeting "victim-perpetrators," who exhibit the worst outcomes in mental health and academic performance.
- Technological innovation: Investigate the role of artificial intelligence as a tool for the proactive detection and prevention of cyberbullying patterns on digital platforms.

It is essential that public health policies recognize that investing in school prevention programs not only reduces individual suffering but is also highly cost effective, as addressing bullying during childhood prevents long-term psychiatric and socioeconomic difficulties in adulthood, thereby reducing the costs to social security systems.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

FUNDING

The authors did not receive funding for the conduct of this research.

AUTHOR CONTRIBUTIONS

Conceptualization: Maikro Osvaldo Chávez Moya, Neisy Pérez Ramos, Orlando Jesús Espinoza Romero.
Research: Maikro Osvaldo Chávez Moya, Leodanis Hernández Cabrera, Neisy Pérez Ramos.
Drafting - initial draft: Maikro Osvaldo Chávez Moya, Leodanis Hernández Cabrera.

REFERENCES

1. Kennedy RS. Bullying Trends in the United States: A Meta-Regression. Trauma Violence Abuse. 2021;22(4):914-27. doi:10.1177/1524838019888555

2. Kessel Schneider S, O'Donnell L, Smith E. Trends in Cyberbullying and School Bullying Victimization in a Regional Census of High School Students, 2006-2012. J Sch Health. 2015;85(9):611-20. doi:10.1111/josh.12290

3. Ariani TA, Putri AR, Firdausi FA, Aini N. Global prevalence and psychological impact of bullying among children and adolescents: a meta-analysis. J Affect Disord. 2025;385:119446. doi:10.1016/j.jad.2025.119446

4. Fraguas D, Díaz-Caneja CM, Ayora M, Durán-Cutilla M, Abregú-Crespo R, Ezquiaga-Bravo I, et al. Assessment of School Anti-Bullying Interventions: A Meta-analysis of Randomized Clinical Trials. JAMA Pediatr. 2021;175(1):44. doi:10.1001/jamapediatrics.2020.3541

5. Juvonen J, Graham S. Bullying in Schools: The Power of Bullies and the Plight of Victims. Annu Rev Psychol. 2014;65(1):159-85. doi:10.1146/annurev-psych-010213-115030

6. Wang J, Iannotti RJ, Nansel TR. School Bullying Among Adolescents in the United States: Physical, Verbal, Relational, and Cyber. J Adolesc Health. 2009;45(4):368-75. doi:10.1016/j.jadohealth.2009.03.021

7. Eyuboglu M, Eyuboglu D, Pala SC, Oktar D, Demirtas Z, Arslantas D, et al. Traditional school bullying and cyberbullying: Prevalence, the effect on mental health problems and self-harm behavior. Psychiatry Res. 2021;297:113730. doi:10.1016/j.psychres.2021.113730

8. Hamm MP, Newton AS, Chisholm A, Shulhan J, Milne A, Sundar P, et al. Prevalence and Effect of Cyberbullying on Children and Young People: A Scoping Review of Social Media Studies. JAMA Pediatr. 2015;169(8):770. doi:10.1001/jamapediatrics.2015.0944

9. Li C, Wang P, Martin-Moratinos M, Bella-Fernández M, Blasco-Fontecilla H. Traditional bullying and cyberbullying in the

digital age and its associated mental health problems in children and adolescents: a meta-analysis. Eur Child Adolesc Psychiatry. 2024;33(9):2895-909. doi:10.1007/s00787-022-02128-x

10. Samara M, Da Silva Nascimento B, El-Asam A, Hammuda S, Khattab N. How Can Bullying Victimisation Lead to Lower Academic Achievement? A Systematic Review and Meta-Analysis of the Mediating Role of Cognitive-Motivational Factors. Int J Environ Res Public Health. 2021;18(5):2209. doi:10.3390/ijerph18052209

11. Choi B, Park S. Bullying Perpetration, Victimization, and Low Self-esteem: Examining Their Relationship Over Time. J Youth Adolesc. 2021;50(4):739-52. doi:10.1007/s10964-020-01379-8

12. Guo X, Zhang Y, Chen Y, Zhang L. School victimization and self-esteem: Reciprocal relationships and the moderating roles of peer support and teacher support. Aggress Behav. 2022;48(2):187-96. doi:10.1002/ab.22009

13. Burger C, Bachmann L. Perpetration and Victimization in Offline and Cyber Contexts: A Variable- and Person-Oriented Examination of Associations and Differences Regarding Domain-Specific Self-Esteem and School Adjustment. Int J Environ Res Public Health. 2021;18(19):10429. doi:10.3390/ijerph181910429

14. Mullan VMR, Golm D, Juhl J, Sajid S, Brandt V. The relationship between peer victimisation, self-esteem, and internalizing symptoms in adolescents: A systematic review and meta-analysis. Greco G, editor. PLOS ONE. 2023;18(3):e0282224. doi:10.1371/journal.pone.0282224

15. Varlık S, Akpınar S, Akpınar Ö, Görünü RM. Bullying plays a moderated mediation role in the association between emotional intelligence and school engagement through self-esteem. Sci Rep. 2026;16(1):6761. doi:10.1038/s41598-026-37764-9

16. Odewumi C, Jones LE. Associations between suicidality and bullying victimization differ by sex and sexual orientation among U.S. high school students, 2011–2023. J Affect Disord. 2026;402:121402. doi:10.1016/j.jad.2026.121402

17. Nagata JM, Yang JH, Singh G, Kiss O, Ganson KT, Testa A, et al. Cyberbullying and Sleep Disturbance Among Early Adolescents in the U.S. Acad Pediatr. 2023;23(6):1220-5. doi:10.1016/j.acap.2022.12.007

18. Mang L, Huang N, Liu X, Zhen C, Guo J. The interaction effects of social support and four types of bullying on sleep quality in Chinese adolescents. J Affect Disord. 2023;341:119-27. doi:10.1016/j.jad.2023.08.092 PubMed PMID: 37625706.

19. Wen X, Shu Y, Qu D, Wang Y, Cui Z, Zhang X, et al. Associations of bullying perpetration and peer victimization subtypes with preadolescent's suicidality, non-suicidal self-injury, neurocognition, and brain development. BMC Med. 2023;21(1):141. doi:10.1186/s12916-023-02808-8 PubMed PMID: 37046279; PubMed Central PMCID: PMC10091581.

20. Cubillo A. Neurobiological correlates of the social and emotional impact of peer victimization: A review. Front Psychiatry. 2022;13:866926. doi:10.3389/fpsyt.2022.866926 PubMed PMID: 35978845; PubMed Central PMCID: PMC9376443.

21. Zhang X, Xie C, Chen Y, Qiu B. Associations Among Cyberbullying Victimization, Inhibitory Control, Neural Activation of Error Processing, and Mental Health Problems in Adolescents: Neuroimaging, Retrospective Longitudinal Cohort Study Using the Adolescent Brain Cognitive Development Data. J Med Internet Res. 2026;28:e75126. doi:10.2196/75126 PubMed PMID: 41707198; PubMed Central PMCID: PMC12961395.

22. Hysing M, Askeland KG, La Greca AM, Solberg ME, Breivik K, Sivertsen B. Bullying Involvement in Adolescence: Implications for Sleep, Mental Health, and Academic Outcomes. J Interpers Violence. 2021;36(17-18):NP8992-9014. doi:10.1177/0886260519853409

23. Menken MS, Isaiah A, Liang H, Rivera PR, Cloak CC, Reeves G, et al. Peer victimization (bullying) on mental health, behavioral problems, cognition, and academic performance in preadolescent children in the ABCD Study. Front Psychol. 2022;13:925727. doi:10.3389/fpsyg.2022.925727

24. Evans CBR, Smokowski PR, Rose RA, Mercado MC, Marshall KJ. Cumulative Bullying Experiences, Adolescent Behavioral and Mental Health, and Academic Achievement: An Integrative Model of Perpetration, Victimization, and Bystander Behavior. J Child Fam Stud. 2019;28(9):2415-28. doi:10.1007/s10826-018-1078-4

25. Arseneault L. Annual Research Review: The persistent and pervasive impact of being bullied in childhood and adolescence: implications for policy and practice. J Child Psychol Psychiatry. 2018;59(4):405-21. doi:10.1111/jcpp.12841

26. Bhatia R. The impact of bullying in childhood and adolescence. Curr Opin Psychiatry. 2023;36(6):461-5. doi:10.1097/YCO.0000000000000900