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Editorial: Advancing understanding and mitigating antisocial and bullying behaviors: insights and strategies for school-based intervention

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Editorial on the Research Topic

[Advancing understanding and mitigating antisocial and bullying behaviors: insights and strategies for school-based intervention](#)

1 Introduction

Aggressive behavior is generally defined as any intentional act aimed at harming or injuring another person physically, verbally, or psychologically (Anderson and Bushman, 2002; Baron and Richardson, 1994). School bullying describes a damaging social process that is based on an imbalance of power which derives from social and institutional norms. It is defined as repeated aggressive behavior aimed at harming individuals physically, emotionally, or socially (O'Higgins Norman, 2024). Bullying behaviors are often subdivided into so-called traditional and cyberbullying. Traditional bullying, also known as face-to-face bullying, is further subdivided into physical, verbal and relational (social/emotional) forms (Jacobsen and Bauman, 2007). Physical bullying includes actions such as hitting, kicking and damaging property, while verbal bullying includes insults, name-calling and threats. Social bullying seeks to damage a person's reputation or humiliate them through behaviors such as spreading rumors, exclusion, and negative gestures (National Center Against Bullying, 2021). With advances in technology, a comparatively new form of bullying referred to as cyberbullying has emerged, which involves intentional harm through the use of electronic communication devices such as computers and smartphones (Englander et al., 2017).

Bullying in schools is a widespread global problem that negatively affects the physical and mental health of students (Ferrer-Cascales et al., 2019; Nickerson, 2019; Perveen et al., 2022; Shahid et al., 2022; Shamsi et al., 2019; Waasdorp et al., 2017). For example, a meta-analysis and systematic review conducted among the Chinese population found a pooled prevalence of 22.7% for overall bullying victimization and 15.7% for bullying

perpetration. Specifically, the estimated prevalence rates for face-to-face bullying were 20.8% for victimization and 10.3% for perpetration, while the rates for cyberbullying were 9.6% and 8.4%, respectively (Xing et al., 2023). Similarly, a study in Egypt by Ahmed et al. (2022) reported that 12.5% of primary school students experienced bullying at school. In another study from Germany, Fischer and Bilz (2024) found that about 14% of the students surveyed reported direct experiences of school bullying, while about 7% reported experiences of cyberbullying, either as victims or perpetrators. According to the UN Secretary-General's Special Representative on Violence against Children, "protection from bullying is a fundamental human right" (United Nations, 2018). Despite the growing body of research on bullying prevention and intervention in schools, bullying remains a prevalent issue, highlighting the need for further studies to yield more robust findings, particularly in countries where research on this topic is still emerging and has only recently gained recognition (Cretu and Morandau, 2024).

The Research Topic titled *Advancing understanding and mitigating antisocial and bullying behaviors: insights and strategies for school-based intervention* aims to bring together evidence-based successful prevention and intervention strategies specifically designed for schools, as well as provide promising starting points for future intervention measures by providing new knowledge of the more complex mechanisms of bullying and its relationship to various contextual factors. The seven research articles featured in this Research Topic not only aim to extend our knowledge about violence, bullying, antisocial behaviors, and their repercussions, but also to advance scientific evidence on effective prevention and intervention strategies in school settings. The Research Topic includes studies from Asia, Europe, Africa and South America. A qualitative analysis of a school-wide bullying prevention program was conducted in Chile (López et al.), a qualitative study is from Switzerland examining the role of social norms and identity in bullying motivations (Moody and Stahel), and research from Sierra Leone highlights the involvement of multiple stakeholders, such as teachers, parents, and the community, in bullying prevention (Osborne). Additionally, a study from Korea explores the role of the Youth Police Academy in bullying prevention based on professional experiences and perspectives (Hong and Goo). The remaining studies are a quantitative analysis from China on the correlations between school bullying victimization, social mindfulness, self-concept clarity, and cognitive reappraisal (Yang et al.), an emotional perspective-based examination of online interactions among Spanish adolescents (Orejudo et al.), and a quantitative survey conducted in China to assess the cumulative ecological risk associated with moral disengagement and cyberbullying (Miao and Li).

2 Understanding bullying at its core—Interplay of psychological variables

The collection of research articles explores the interplay of different psychological variables to deepen our understanding

of bullying and to inform the development of more effective prevention programmes. A critical developmental task during adolescence is the formation of self-identity (Erikson, 1968). As adolescents navigate this period of self-exploration, they engage in a variety of experiences that help to shape a distinct sense of self. A well-defined self-concept has been shown to enhance self-regulation skills, reduce tendencies to rumination, and promote empathy by enabling adolescents to understand the perspectives of others (Harter, 2012; Zimmerman, 2000). This in turn supports the use of positive coping strategies, such as cognitive reappraisal, to change their perspective on negative social experiences. While increasing individualization, identity exploration and autonomy are key challenges of adolescence, social relationships, such as relationships with friends and peers, are crucial in providing support, shaping values, and fostering a sense of belonging (Shell, 2024).

A cross-sectional study by Yang et al., presented in this Research Topic of research studies and conducted in China, examined the relationship between school bullying victimization, self-concept clarity (SCC), cognitive reappraisal and social mindfulness. The study also examined the chain mediating effects of SCC and cognitive reappraisal in this relationship. Results showed that students who had experienced bullying were more likely to report lower levels of social mindfulness, suggesting that victimization may impair their ability to act in ways that consider the needs and perspectives of others. Drawing on interdependence theory (Rusbult and Van Lange, 2003), the study explains that bullied individuals often lack opportunities to develop social interaction skills because they frequently experience verbal abuse and social exclusion rather than positive peer engagement. This social disconnection may contribute to behaviors associated with systemic aggression. In addition, research suggests that children who experience persistent victimization may also show impairments in theory of mind development, particularly if they adopt aggressive coping mechanisms - potentially leading to harmful behaviors toward themselves and others (van Geel et al., 2015). Finally, the study confirmed a chain mediation effect, whereby lower self-concept clarity and reduced use of cognitive reappraisal mediated the negative effects of bullying victimization on social mindfulness. These findings provide valuable directions for designing psychological interventions that strengthen adolescents' self-concept and cognitive strategies as protective factors against the effects of bullying. Providing opportunities for positive social interactions to learn from may also be a promising approach.

Another study in the current Research Topic by Moody and Stahel, conducted in the Swiss canton of Valais, explores the links between bullying, youth culture, social norms and identity formation, taking into account the subjective experiences of victims, perpetrators and bystanders. Using interviews and observational data, the study found that students are often judged negatively by their peers when their behavior, knowledge or attitudes deviate from established group norms. Failure to conform to these youth-specific norms can make students more vulnerable to bullying—especially when trying to engage socially with their peers. Notably, the research also observed role fluidity in bullying, where some students switch from being victims to perpetrators in order to escape repeated victimization. In primary schools, bullying

and social exclusion were found to be closely linked to students' ability to understand and follow school rules and codes of conduct, such as appropriate behavior in conflict. The findings underline the central role of adolescent norms in shaping peer dynamics. Students who fail to master these social codes are often excluded or targeted, as competence in navigating peer culture is seen as a crucial social skill. These dynamics reveal that bullying is less about individual pathology and more about group-driven processes that enforce conformity and collective identity. In this context, the risk of being bullied is particularly high when students place a high value on peer acceptance. Overall, the study offers a deeper understanding of bullying as a socially constructed phenomenon, rooted in the maintenance of group norms and identities rather than just individual behavior. In this context, bullying can be understood as a corrective to perceived deviance from group values. However, the editors emphasize the need for further research to explore how strategies should be developed in cases where bullying is viewed as a social norm in the classroom, particularly how dysfunctional or negative social norms may contribute to and reinforce bullying behaviors.

A survey study by [Miao and Li](#), published in the current Research Topic and conducted in Hebei Province, China, examines the impact of cumulative ecological risk factors on cyberbullying, focusing on the mediating roles of belief in a just world and moral disengagement. Drawing on [Bronfenbrenner's \(1979\)](#) ecosystem theory, the study emphasizes that individuals are influenced by multiple overlapping ecological systems—such as family, school and peer environments—and that assessing a single risk factor in isolation fails to capture the complex interplay of influences in real-life contexts ([Evans et al., 2013](#)). This approach is in line with [Osborne's](#) contribution in the same Research Topic, which highlights the importance of involving multiple stakeholders in effective bullying prevention strategies. In addition to external risks, the study highlights the role of internal cognitive factors: Belief in a just world refers to the perception that people generally get what they deserve ([Lerner and Miller, 1978](#)), Shattered assumption theory ([Janoff-Bulman, 2010](#)) suggests that when individuals encounter risks, their belief in a fair world may be disrupted, leading to more negative worldviews. Moral disengagement is the tendency to rationalize unethical behavior, reduce personal responsibility and decrease empathy toward victims ([Bandura et al., 1996](#)). It is a key factor in justifying harmful actions such as cyberbullying. Key findings from the study include that cumulative ecological risk was positively associated with moral disengagement and cyberbullying, and negatively associated with belief in a just world. Belief in a just world and moral disengagement each partially mediated the relationship between ecological risk- *environmental and social factors* that increase the likelihood of negative outcomes (like aggression, bullying, or mental health problems) and cyberbullying. Finally, belief in a just world and moral disengagement played a cascading mediating role between cumulative ecological risk and cyberbullying among college students. The study concludes that reducing multiple risk factors through coordinated efforts by families, schools, and communities, as well as strengthening belief in a just world and addressing moral disengagement, are critical strategies for reducing cyberbullying among college students.

3 Efforts to mitigate bullying in different regions

The current Research Topic also includes articles highlighting regional initiatives focused on bullying prevention. Notable examples include the national whole-school programme for violence prevention in schools in Chile ([López et al.](#)) and the Youth Police Academy (YPA) programme implemented in South Korea ([Hong and Goo](#)).

Globally, incidents of school violence have bounced back to previous levels since the return to face-to-face learning following the COVID-19 pandemic—and the Latin American region is no exception. During the lockdown, research from Mexico and Chile found increased stress and mental health problems among teachers ([Lizana and Vega-Fernandez, 2021](#); [Cortés-Álvarez et al., 2023](#)), which contributed to a broader atmosphere of fear and insecurity when schools reopened. This environment has the potential to undermine learning conditions and threaten the overall quality of education systems ([López et al., 2022](#); [McMahon et al., 2022](#)). In response, the Chilean Ministry of Education, with the support of 17 universities, launched a comprehensive policy to reactivate education in 2022. A key component of this policy is the Learning to Live Together programme (Programa A Convivir se Aprende; ACSA), which focuses on school climate and mental health. Conceptually based on the whole-school approach first introduced by [Olweus \(1993\)](#), the programme aims to build the capacity of school leadership teams and administrators in targeted municipalities to address and prevent school violence while promoting a positive school climate ([Ministry of Education, 2022](#)). The framework of the programme is based on five core principles: a. Inclusion—promoting respectful, equitable relationships; b. Collective care—prioritizing emotional and psychosocial wellbeing; c. Democratic participation—involving the school community in shaping a safe climate; d. Territorial approach—tailoring strategies to local socio-cultural contexts; e. Multi-tiered support—implementing interventions at three levels: Promotional and universal strategies to prevent problems before they arise; Targeted group interventions for students who need extra support; and Individualized support, in coordination with local health and social networks, for complex cases. A study in the current Research Topic by [López et al.](#) presents findings from a large-scale qualitative evaluation assessing the early feasibility of the programme. Using a mixed-methods design, the research highlights a high level of acceptance and commitment among participating schools. The most valued aspects included the conceptual underpinning of the whole-school approach, the collaboration with local universities, and the creation of school climate networks, which were perceived as valuable professional learning communities. A key challenge for the future will be to create sustainability of these elements.

School bullying has also emerged as a serious problem in South Korean schools, especially after three student suicides were reported in 2012 ([Hong et al., 2023](#)). In response, the Korean government implemented the 'Basic Plan for School Bullying Prevention and Countermeasures' ([Ministry of Education, 2020](#)) to address this growing problem. One of the key initiatives under this plan is the Youth Police Academy (YPA)—an experiential school bullying prevention programme introduced as part of

the 2014 Field-Oriented School Bullying Countermeasures Plan. The YPA program involves school police officers (SPOs)—active-duty officers assigned to address school violence—who provide interactive, experiential anti-bullying education at youth police academies in various regions (Kim and Hwang, 2018, p. 2). A recent study by Hong and Goo, featured in the current Research Topic, explores the effectiveness and relevance of school bullying prevention programmes through the lens of SPOs' professional experiences within the YPA. Using a narrative inquiry approach, the study explores the unique identities and perspectives of these under-researched professionals. The findings suggest that Youth Police Academies not only educate students about bullying prevention, but also introduce them to the police profession. SPOs often find unexpected fulfillment and pride in their role, which differs significantly from traditional police duties. The YPA is characterized by a proactive, student-centered approach that emphasizes direct engagement and personalized support—a direction that is in line with the government's current focus on victim-centered strategies (Ministry of Education, 2020). This programme seems to take the task of preventive police work seriously. Again, the challenge will be to integrate this project into the resources of the police force in a sustainable way.

4 Addressing bullying through inclusive and collaborative approaches

The current collection of research articles also presents strategies and solutions to address bullying and related challenges by emphasizing the involvement of multiple stakeholders (Osborne) and leveraging online platforms to gather collective input for resolving complex issues like sexting (Orejudo et al.).

Bullying is a pervasive issue and it has been reported that multiple stakeholders' involvement is necessary to mitigate this Research Topic at its core. The review article and conceptual analysis by Osborne focussed on strategies to overcome the issue of bullying in Sierra Leone and highlighted the role and the impact multiple stakeholders have on bullying prevention and school climate. The study highlights the critical role of teachers, students, school counselors and administrators at the forefront of bullying prevention, emphasizing both preventive and reactive (post-ventive) strategies. It distinguishes between interventions aimed at perpetrators and those aimed at supporting victims. In addition, the study highlights the importance of parental involvement—including maintaining open communication, recognizing signs of bullying and fostering strong and collaborative relationships with schools. The study also explores the influence of traditional, religious and community leaders, as well as wider community members as key stakeholders in bullying prevention. Their support through school partnerships, provision of resources, community-wide awareness campaigns and advocacy for anti-bullying policies is seen as vital. Finally, the role of the media, government agencies and non-governmental organizations (NGOs) is examined in detail, highlighting their contributions to raising awareness, shaping public discourse and supporting long-term systemic change. This study clearly illustrates the different levels of the socio-ecological model by Bronfenbrenner (1979).

In the study by Orejudo et al., conducted in Zaragoza, Spain, the complex issue of cyberbullying is examined through an emotional lens, using the framework of Collective Intelligence (CI) (Woolley et al., 2010) to analyse how adolescents interact in response to a sexting incident on an online platform. The core principle of CI suggests that the collaborative performance of a group can exceed the average performance of individual members working alone. The study used a Collective Intelligence platform (Orejudo et al., 2022), which is designed to foster meaningful interaction and produce high-quality group solutions to ethical dilemmas. In this case, 794 students participated in a one-hour session in which they were presented with a sexting scenario involving a girl named Pilar whose private photo was shared publicly without her consent. Participants were then asked to reflect on the situation through open-ended ethical questions and to submit written responses with no word limit. The aim was to track the development of students' responses throughout the session in order to assess the quality and depth of their collective reasoning. Analysis showed that participants produced increasingly complex and thoughtful responses as the task progressed, confirming that structured group interaction can enhance collective problem solving and ethical reflection. The findings highlight the educational potential of such platforms in fostering digital citizenship and emotional awareness. Features such as adjustable interaction pacing and customisable consensus-building mechanisms offer flexible, innovative ways to enhance learning experiences around challenging topics such as cyberbullying or sexting. This study not only contributes to understanding the emotional and ethical dimensions of adolescent online behavior, but also strengthens the case for using collective intelligence frameworks in educational settings to address complex social issues. However, this kind of intervention should always be moderated to prevent dysfunctional problem-solving and the development of a antisocial echo chamber, and to ensure prosocial ethical reflections.

5 Conclusion

This Research Topic brings together diverse, interdisciplinary, and innovative perspectives on bullying and antisocial behavior in different cultural and educational contexts. The studies included highlight the multifaceted nature of bullying—revealing how individual, interpersonal and systemic factors interact to initiate, motivate and exacerbate the harm caused by bullying behavior. From the role of teachers, students, school counselors, administrators and parental involvement to the impact of youth culture, identity formation and psychological beliefs such as moral disengagement and belief in a just world, each contribution adds depth to our understanding of the dynamics of bullying. Several articles highlighted innovative approaches to prevention, including large-scale government-supported programmes such as Chile's Programa A Convivir se Aprende; ACSA and South Korea's Youth Police Academy (YPA), while others explored the importance of collective intelligence and digital platforms for ethical reasoning and problem-solving. The importance of engaging multiple stakeholders—schools, families, communities, policymakers and students themselves—emerged as a consistent theme throughout the topic. By examining bullying from both a

preventative and interventionist perspective, and by incorporating both qualitative and quantitative methods, this collection of articles serves as a valuable resource for educators, researchers and policymakers. Ultimately, it contributes to the ongoing global dialogue on how to create safer, more inclusive and psychologically supportive school environments for all learners. We hope that the findings and strategies shared here will inspire further research and collaborative action to address the persistent challenge of bullying in schools worldwide.

Author contributions

SS: Conceptualization, Writing – original draft. AS-K: Project administration, Supervision, Writing – review & editing. MK: Conceptualization, Writing – original draft.

References

- Ahmed, G. K., Metwaly, N. A., Elbeh, K., Galal, M. S., and Shaaban, I. (2022). Prevalence of school bullying and its relationship with attention deficit-hyperactivity disorder and conduct disorder: a cross-sectional study. *Egypt. J. Neurol. Psychiat. Neurosurg.* 58:60. doi: 10.1186/s41983-022-00494-6
- Anderson, C. A., and Bushman, B. J. (2002). Human aggression. *Annu. Rev. Psychol.* 53, 27–51. doi: 10.1146/annurev.psych.53.100901.135231
- Bandura, A., Barbaranelli, C., Caprara, G. V., and Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *J. Pers. Soc. Psychol.* 71, 364–374.
- Baron, R. A., and Richardson, D. R. (1994). *Human Aggression* (2nd ed.). New York: Plenum Press.
- Bronfenbrenner, U. (1979). Toward an experimental ecology of human development. *Am. Psychol.* 32, 513–531. doi: 10.1037/0003-066X.32.7.513
- Cortés-Álvarez, N. Y., Garduño, A. S., Sánchez-Vidaña, D. I., Marmolejo-Murillo, L. G., and Vuelvas-Olmos, C. R. (2023). A longitudinal study of the psychological state of teachers before and during the COVID-19 outbreak in Mexico. *Psychol. Rep.* 126, 2789–2820. doi: 10.1177/00332941221100458
- Cretu, D. M., and Morandau, F. (2024). Bullying and cyberbullying: a bibliometric analysis of three decades of research in education. *Educ. Rev.* 76, 371–404. doi: 10.1080/00131911.2022.2034749
- Englander, E., Donnerstein, E., Kowalski, R., Lin, C. A., and Parti, K. (2017). Defining cyberbullying. *Pediatrics* 140, S148–S151. doi: 10.1542/peds.2016-1758U
- Erikson, E. H. (1968). *Identity Youth and Crisis*. New York: WW Norton and Company.
- Evans, G. W., Li, D. P., and Whipple, S. S. (2013). Cumulative risk and child development. *Psychol. Bull.* 139, 1342–1396. doi: 10.1037/a0031808
- Ferrer-Cascales, R., Albaladejo-Blázquez, N., Sánchez-SanSegundo, M., Portilla-Tamarit, I., Lordan, O., and Ruiz-Robledillo, N. (2019). Effectiveness of the TEI program for bullying and cyberbullying reduction and school climate improvement. *Int. J. Environm. Res. Public Health*, 16:580. doi: 10.3390/ijerph16040580
- Fischer, S. M., and Bilz, L. (2024). Traditional bullying and cyberbullying at schools in Germany: results of the HBSC study 2022 and trends from 2009/10 to 2022. *J. Health Monitor.* 9:42. doi: 10.25646/11872
- Harter, S. (2012). *The Construction of the Self: Developmental and Sociocultural Foundations* (2nd ed.). New York: Guilford Press.
- Hong, M. Y., Han, Y. K., Chang, W. K., and Kim, H. Y. (2023). Exploring the changes in school violence tendency in Korea during COVID-19 period: centered on victim experiences. *J. Res. Educ.* 36, 59–90. doi: 10.24299/kier.2023.363.59
- Jacobsen, K. E., and Bauman, S. (2007). Bullying in schools: school counselors' responses to three types of bullying incidents. *Prof. School Counsel.* 11, 1–9. doi: 10.5330/PSC.n.2010-11.1
- Janoff-Bulman, R. (2010). *Shattered Assumptions*. New York: Simon and Schuster.
- Kim, S., and Hwang, J. S. (2018). Analysis of actual condition and issues of school police officer system operation. *Polit. Educ.* 25, 1–20. doi: 10.52183/KSPE.2018.25.4.1
- Lerner, M. J., and Miller, D. T. (1978). Just world research and the attribution process: looking back and ahead. *Psychol. Bull.* 85, 1030–1051. doi: 10.1037/0033-2909.85.5.1030
- Lizana, P. A., and Vega-Fernandez, G. (2021). Teacher teleworking during the COVID-19 pandemic: association between work hours, work–family balance and quality of life. *Int. J. Environ. Res. Pub. Health*. 18:7566. doi: 10.3390/ijerph18147566
- López, V., Álvarez, J. P., Morales, M., and Rosales, C. (2022). *Retorno presencial a clases: recomendaciones para el bienestar socioemocional y la prevención de la violencia escolar. Propuestas para Políticas Inclusivas*. Viña del Mar: Centro de Investigación para la Educación Inclusiva. Available online at: <https://recursos.paces.cl/wp-content/uploads/2022/04/Retorno-Presencial-a-Clases-Bienestar-y-Violencia-Escolar-Lopez-Alvarez-Morales-y-Rosales-2022.pdf> (accessed July 27, 2024).
- McMahon, S. D., Anderman, E. M., Astor, R. A., Espelage, D. L., Martinez, A., Reddy, L. A., et al. (2022). *Violence against educators and school personnel: crisis during COVID*. American Psychological Association. Available online at: <https://www.apa.org/education-career/k12/violence-educators-technical-report.pdf> (accessed July 27, 2024).
- Ministry of Education (2020). *The 4th Basic Plan for School Bullying Prevention and Countermeasures (2020–2024)*. Available online at: <https://www.moe.go.kr/boardCnts/viewRenew.do?boardID=316&andlev=0&andstatusYN=W&ands=moecandm=0302&andopType=NandboardSeq=83086> (accessed May 29, 2024).
- Ministry of Education (2022). *Programa territorial de convivencia escolar y atención en crisis*. Available online at: <https://reactivacioneducativa.mineduc.cl/wp-content/uploads/sites/127/2024/05/A-convivir-se-aprende.pdf> (accessed April 25, 2025).
- National Center Against Bullying (2021). *Types of bullying*. Retrieved from *Types of bullying*. Available online at: <https://www.ncab.org.au/bullying-advice/bullying-for-parents/types-of-bullying/> (accessed January 1, 2023).
- Nickerson, A. B. (2019). Preventing and intervening with bullying in schools: a framework for evidence-based practice. *School Ment. Health* 11, 15–28. doi: 10.1007/s12310-017-9221-8
- O'Higgins Norman, J. (2024). "School bullying: an inclusive definition," in *Report for the UNESCO and World Anti-Bullying Working Group*. Dublin: Dublin City University.
- Olweus, D. (1993). *Bullying at School: What We Know and What We Can Do*. Hoboken, NJ: Blackwell.
- Orejudo, S., Cano-Escoriaza, J., Cebollero-Salinas, A. B., Bautista, P., Clemente-Gallardo, J., Rivero, A., et al. (2022). Evolutionary emergence of collective intelligence in large groups of students. *Front. Psychol.* 13:848048. doi: 10.3389/fpsyg.2022.848048
- Perveen, S., Kanwal, M., and Bibi, H. (2022). Bullying and harassment in relation to mental health: a closer focus on education system. *J. Educ. Res. Soc. Sci. Rev.* 2, 32–38.
- Rusbult, C. E., and Van Lange, P. A. M. (2003). Interdependence, interaction, and relationships. *Annu. Rev. Psychol.* 54, 351–375. doi: 10.1146/annurev.psych.54.101601.145059
- Shahid, M., Rauf, U., Sarwar, U., and Asif, S. (2022). Impact of bullying behavior on mental health and quality of life among pre-adolescents and adolescents in Sialkot-Pakistan. *Pakist. J. Humanit. Soc. Sci.* 10, 324–331. doi: 10.52131/pjhs.2022.1001.0200
- Shamsi, N. I., Andrades, M., and Ashraf, H. (2019). Bullying in school children: How much do teachers know? *J. Family Med. Primary Care* 8, 2395–2400. doi: 10.4103/jfmpc.jfmpc_370_19
- Shell (2024). *Summary of the Shell Youth Study 2024*. Available online at: <https://www.shell.de/ueber-uns/initiativen/shell-jugendstudie-2024.html> (accessed April 25, 2025).

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- United Nations (2018). Bullying: Protection for Children is a 'Fundamental Human Right' Says Top UN Advocate. *UN News*. Available online at: <https://news.un.org/en/story/2018/10/1022562> (accessed April 1, 2025).
- van Geel, M., Goemans, A., and Vedder, P. (2015). A meta-analysis on the relation between peer victimization and adolescent non-suicidal self-injury. *Psychiatry Res.* 230, 364–368. doi: 10.1016/j.psychres.2015.09.017
- Waasdorp, T. E., Pas, E. T., Zablotsky, B., and Bradshaw, C. P. (2017). Ten-year trends in bullying and related attitudes among 4th-to 12th-graders. *Pediatrics* 139:e20162615. doi: 10.1542/peds.2016-2615
- Woolley, A. C., Chabris, C. F., Pentland, A., Hashmi, N., and Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science* 330, 686–688. doi: 10.1126/science.1193147
- Xing, J., Peng, M., Deng, Z., Chan, K. L., Chang, Q., and Ho, R. T. H. (2023). The prevalence of bullying victimization and perpetration among the school-aged population in Chinese communities: A systematic review and meta-analysis. *Trauma, Viol. Abuse* 24, 3445–3460. doi: 10.1177/15248380221129595
- Zimmerman, B. J. (2000). Self-efficacy: an essential motive to learn. *Contemp. Educ. Psychol.* 25, 82–91. doi: 10.1006/ceps.1999.1016