



A Model for Physical Education Based Prevent Bullying Instruction for Primary School Students

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Abstract

Background: Bullying is a persistent issue in primary education, impacting children's physical, emotional, and social development. Despite efforts to create positive school environments, bullying continues in various forms, including physical, psychological, and cyberbullying. Many prevention programs are reactive rather than proactive, focusing on punishment instead of fostering positive behavior from an early age. Objective: This study aims to develop and evaluate a physical education (PE) based bullying prevention model for primary school students. The model integrates physical activity with social-emotional learning (SEL) to promote a safer, inclusive school environment. Methods: A Systematic Literature Review (SLR) was conducted to examine research on PE based bullying prevention interventions. Studies were selected based on their focus on primary school students, PE, and bullying behaviors. The review followed the PRISMA framework for methodological rigor. Results: The SLR highlights the effectiveness of PE in reducing bullying by promoting positive social behaviors. Key factors include the role of PE teachers, cooperative learning strategies, and SEL integration. Well-structured PE interventions were found to reduce bullying and enhance social skills like empathy and conflict resolution. However, few studies provided a comprehensive PE-based bullying prevention model. Conclusion: This study proposes a PE-based bullying prevention model that integrates physical activity with SEL, fostering a safe and inclusive learning environment. Further research is needed to assess its long-term impact and applicability.

How to Cite

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INTRODUCTION

Bullying continues to represent a pervasive issue in primary education worldwide, posing serious risks to children's physical safety, emotional health, and social development. Although schools increasingly emphasize the creation of supportive and inclusive learning environments, bullying remains prevalent in multiple forms, including physical, psychological, and sexual misconduct (Indonesia, 2022). Such behaviors not only interfere with the learning process but also generate long-term negative impacts for victims, perpetrators, and the broader school ecosystem (Zhou et al., 2023).

In recent years, schools have been placed at the forefront of bullying prevention initiatives. Nevertheless, many existing strategies remain largely reactive, prioritizing disciplinary responses after incidents have occurred rather than cultivating prosocial attitudes and behaviors from an early stage (Fredrick et al., 2022). This concern is particularly critical in primary education, as children at this developmental stage are forming foundational social, emotional, and moral competencies that influence their future conduct (La Salle-Finley et al., 2024).

Prior studies indicate that teachers frequently lack structured instructional frameworks and sufficient institutional support to address bullying systematically within everyday classroom instruction. Bullying prevention efforts are often delivered through stand-alone programs, such as counseling services or school-wide campaigns, which are seldom embedded within subject-based learning activities. Consequently, opportunities to integrate social-emotional learning into routine classroom practices are often underutilized (Gaffney et al., 2019).

Physical education (PE) has emerged as a particularly promising context for fostering positive social interactions and reducing bullying behaviors. The interactive nature of PE—characterized by teamwork, competition, emotional regulation, and peer collaboration—provides a conducive environment for nurturing empathy, cooperation, and mutual respect (Risyanto & Yulianto, 2025). Evidence suggests that well-designed PE programs can effectively reduce aggressive tendencies while enhancing students' social skills, especially when cooperative learning approaches are intentionally applied (Satrianingsih & Yulianto, 2025).

Recent scholarship in sport education and PE pedagogy further highlights the value of instructional approaches that integrate cooperative learning and gamification. Such approaches

have been shown to improve student engagement while simultaneously promoting prosocial values (Artihung & Yulianto, 2025). Gamified learning experiences encourage rule adherence, fair play, and peer support—core principles aligned with bullying prevention. However, the majority of existing studies focus on discrete activities or short-term interventions, rather than on comprehensive instructional models embedded within PE curricula (Shao et al., 2025).

Moreover, empirical research examining PE-based bullying prevention at the primary school level remains limited. Many investigations concentrate primarily on observable behavioral outcomes, without concurrently evaluating critical social-emotional dimensions such as empathy, cooperation, and aggressiveness (Mudzakir et al., 2025). This limitation constrains a deeper understanding of the mechanisms through which PE-based interventions influence bullying behavior and the extent to which such effects are sustained over time (Jiménez-Barbero et al., 2020).

Another notable gap in the literature concerns the absence of clearly articulated and systematically structured PE instructional models specifically designed for bullying prevention (Yulianto et al., 2025). While prior research has demonstrated the potential of PE to mitigate bullying, few studies offer teachers practical and coherent frameworks for embedding bullying prevention objectives into their instructional practices. As a result, educators often face challenges in translating theoretical concepts into effective classroom implementation (Purwanto & Susanto, 2018).

Addressing this gap is particularly important within primary education, where early preventive efforts can reduce the likelihood of escalating aggressive behaviors in later schooling stages. A PE-based instructional model that deliberately integrates cooperative learning, gamification, and reflective activities holds promise not only as an instructional approach but also as a proactive strategy for bullying prevention (Gaffney et al., 2019).

Accordingly, there is an urgent need for research that develops and empirically evaluates a structured PE-based instructional model aimed at preventing bullying among primary school students. Such research should extend beyond measuring bullying prevalence to include broader developmental indicators, such as empathy, cooperation, and aggressiveness, in order to provide a comprehensive evaluation of the model's effectiveness.

Therefore, this study seeks to design and assess a physical education-based instructional

model for bullying prevention in primary schools. Specifically, the study examines differences in bullying behavior between students who participate in the intervention and those receiving conventional PE instruction, as well as the model's effects on empathy, cooperation, and aggressiveness. The findings are expected to contribute to the sport education literature by offering a practical, evidence-informed instructional framework to support bullying prevention in primary school physical education.

METHODS

This research adopted a Systematic Literature Review (SLR) methodology to systematically locate, appraise, and synthesize empirical studies examining physical education-based instructional approaches for bullying prevention in primary school settings. The SLR method was chosen to ensure a high level of methodological rigor, transparency, and reproducibility in the examination of existing evidence, in accordance with best-practice standards for systematic reviews in educational and sport pedagogy research (Page et al., 2021). The review was conducted using a clearly defined and structured protocol derived from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This protocol directed all phases of the review process, including the identification of relevant studies, screening procedures, assessment of eligibility, and the selection of studies for final inclusion. The use of a standardized and transparent protocol was intended to reduce the risk of selection bias and to maintain consistency and objectivity throughout each stage of the review (Page et al., 2021).

A comprehensive literature search was carried out across several major academic databases commonly used in sport education and educational research, including Scopus, Web of Science, ERIC, and Google Scholar. These databases were selected to capture a broad range of peer-reviewed studies relevant to physical education, bullying prevention, and primary education.

The search was conducted using combinations of keywords and Boolean operators, such as: “physical education” OR “sport education”, AND “bullying prevention” OR “aggressive behavior”, AND “primary school” OR “elementary school”, AND “instructional model” OR “learning model”. Data collection is part of this research by collecting the data obtained from articles used as research. following inclusion withdrawal as well as the exclusion criteria in the assessment according to the following criteria:

Inclusion Criteria :

- Were published in peer-reviewed journals;
- Focused on primary or elementary school students;
- Examined physical education or sport-based learning contexts;
- Addressed bullying behavior, aggression, empathy, cooperation, or related social-emotional outcomes;
- Reported empirical findings using qualitative, quantitative, or mixed-methods designs.

Exclusion Criteria :

- Focused solely on secondary or higher education;
- Were non-empirical publications (e.g., editorials, opinion papers, book reviews);
- Did not clearly relate to physical education or sport-based instruction;
- Were not published in English.

Data were extracted using a standardized form that captured key study characteristics, including authorship, publication year, country, research design, participants, type of PE intervention, outcome variables related to bullying and social-emotional development, and main findings. This procedure ensured consistency and enabled comparison across studies.

Due to variations in research designs and outcome measures, a narrative synthesis was applied to integrate the findings. The analysis focused on identifying key themes and instructional features related to bullying prevention in PE, with particular attention to cooperative learning, gamification, and structured instructional models influencing bullying behavior and social-emotional outcomes.

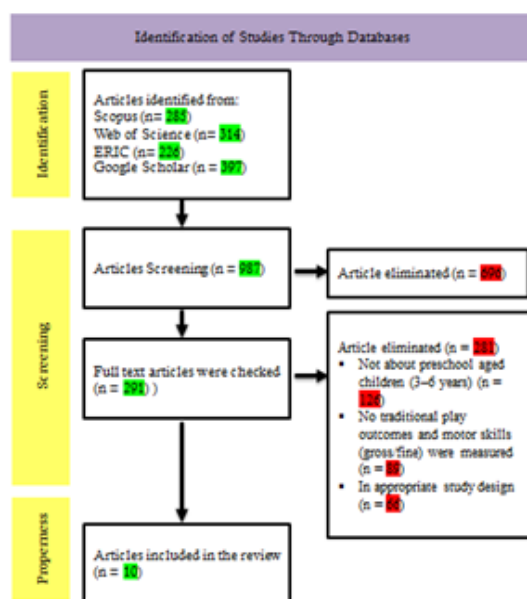


Figure 1. PRISMA Flow Diagram

RESULTS AND DISCUSSION

Name & Title	Year	Journal	Results
Jiménez-Barbero, José Antonio, et al. "Physical education and school bullying: A systematic review."	2020	Physical Education and Sport Pedagogy	The results of this review suggest the importance of PE in the prevention of bullying. Secondly, it is emphasized that bullying situations have a negative impact on students' enjoyment of PE, leading to detrimental consequences for their physical and psychological health. Thirdly, the figure of the PE teacher as a key element to prevent and/or encourage bullying was obvious.
García-Hermoso, Antonio, et al. "Bullying victimization, physical inactivity and sedentary behavior among children and adolescents: a meta-analysis."	2020	International journal of behavioral nutrition and physical activity	The present study establishes the first quantitative framework for understanding the influence of physical activity and sedentary behavior on bullying victimization, and lays the groundwork for future studies and interventions aimed to its promotion.
Benítez-Sillero, Juan de Dios, et al. "Intervention programme to prevent bullying in adolescents in physical education classes (PREBULLPE): a quasi-experimental study."	2021	Physical Education and Sport Pedagogy	The implementation of a specific intervention to prevent bullying inserted into the physical education curriculum seems to have decreased bullying and cyberbullying victimisation.
Zhou, Zhuang, et al. "Correlates of bullying behavior among children and adolescents in physical education: a systematic review."	2023	Psychology research and behavior management	The results indicate that bullying is a complex and multifaced behavior primarily determined by demographic, physical movement, physical appearance, psycho-cognitive, teacher-related, and contextual factors. Future studies need to enhance the diversity of research samples and comparative studies on the factors influencing bullying behavior among children and adolescents in different countries. Additionally, a more extensive range of intervention studies addressing bullying behavior among children and adolescents is warranted.
Sari, Rini Kartika, and Andi Pratama. "Integrating Gamification in Multicultural Classrooms A Study on Enhancing Collaborative Learning and Cultural Empathy."	2024	International Journal of Educational Insights and Innovations	This research contributes to the growing field of gamification in education, providing a scalable and adaptable framework for multicultural classrooms. The findings highlight gamification's potential to transform educational practices, fostering a collaborative and empathetic environment that embraces cultural diversity.
Shao, Jiawei, Siti Nazleen Abdul Rabu, and Chuang Chen. "The impact of gamified interactive e-books incorporating metacognitive reading strategies on Chinese elementary students' mathematical reading comprehension, word problem-solving performance, and general reading motivation."	2025	Education and Information Technologies	This literature discusses how game-based approaches (gamification) and role simulation in Physical Education can improve social awareness, empathy, and conflict resolution skills. These studies support the finding that interactive interventions are effective in reducing bullying behavior.
Fredrick, Stephanie S., Stephanie Traudt, and A. Nickerson. "Social emotional learning practices in schools and bullying prevention."	2022	Encyclopedia of Education. New York: Routledge	findings from this work suggest that SEL programs can aid in reducing externalizing and aggressive behavior and emerging research also suggests that these programs can prevent bullying perpetration and change student attitudes toward bullying.
Chen, Chun, et al. "The association between bullying victimization and problematic internet use: The role of Social-Emotional Learning (SEL) competencies."	2024	School Psychology Review	The study demonstrated that traditional bullying and cyberbullying victimization place students at a higher risk of PIU. Overall, SEL competencies were protective factors against PIU. However, higher levels of overall SEL competencies, social awareness, relationship skills, and self-awareness intensified the positive relationship between traditional bullying victimization and PIU. This implies that students with high SEL competencies generally experienced less bullying victimization. However, once they experienced bullying, they were more vulnerable to PIU.

La Salle-Finley, Tamika, et al. "Understanding and promoting school climate, bullying, and social-emotional learning: Transdisciplinary and transnational science advancing positive youth outcomes."	2024	School Psychology Review	Promoting school climate and social and emotional learning are important to support student success at school and beyond. Transdisciplinary and transnational research provides valuable information to understand and implement supports that are culturally sensitive and responsive. While school climate and social and emotional learning are often studied separately, both are necessary for students to thrive.
Gaffney, Hannah, David P. Farrington, and Maria M. Ttofi. "Examining the effectiveness of school-bullying intervention programs globally: A meta-analysis."	2019	International Journal of Bullying Prevention	the importance of such proposals being implemented and evaluated based on scientific criteria is highlighted, being systematically incorporated into the routines of schools, with the integration of anti-bullying actions to educational projects and to educational and school management policies, seeking to improve the quality of life of our children and adolescents.

This study seeks to develop a physical education (PE) based instructional model aimed at preventing bullying among primary school students. Grounded in evidence from prior research, the study contributes a novel framework that embeds bullying prevention strategies directly within the PE curriculum. The following discussion situates the study's findings within the broader literature, with particular attention to the role of PE in mitigating bullying, the factors shaping bullying behavior, and the importance of implementing empirically supported interventions.

Research by (Jiménez-Barbero et al., 2020) underscores the critical role of PE in bullying prevention, noting that bullying can substantially undermine students' engagement in physical activities as well as their psychological and physical well-being. As central agents in PE settings, teachers are uniquely positioned to cultivate safe, inclusive, and supportive learning environments. Consistent with this perspective, the model developed in the present study highlights the proactive involvement of PE teachers in promoting positive peer interactions and ensuring that students feel secure and encouraged to participate in physical activities. This approach aligns with the argument that PE can contribute to bullying reduction by fostering healthy relationships and overall well-being (Jiménez-Barbero et al., 2020).

Evidence from García-Hermoso et al., (2020) further demonstrates a significant association between physical activity participation and lower levels of bullying victimization among children and adolescents. Higher engagement in physical activity is often linked to increased self-confidence and reduced vulnerability to bullying. The findings of the current study reinforce this relationship by emphasizing physical activity as a preventive factor against bullying. Through the inclusion of cooperative and non-competitive activities, the proposed PE model seeks to minimize social tension, enhance peer support, and

ultimately reduce the occurrence of bullying behaviors.

The study by (Benítez-Sillero et al., 2021) reported that bullying prevention initiatives embedded within the PE curriculum are effective in decreasing both bullying and cyberbullying victimization. This evidence supports the instructional model proposed in the present study, which integrates explicit bullying prevention components into PE lessons. The model employs interactive and group-oriented activities designed to develop empathy, communication, and conflict resolution skills, thereby addressing bullying not only in physical spaces but also in digital contexts.

Bullying has also been shown to be a complex phenomenon shaped by multiple interacting factors, including demographic characteristics, physical and psychological attributes, teacher-related influences, and broader contextual conditions (Zhou et al., 2023) In response to this complexity, the proposed PE model adopts a holistic approach by combining physical education with social-emotional learning (SEL). By strengthening students' emotional regulation and interpersonal skills, the model addresses both internal and external determinants of bullying behavior, in line with the multidimensional framework suggested by (Zhou et al., 2023).

The integration of SEL is further supported by (Fredrick et al., 2022) who demonstrated that SEL-based programs can effectively reduce aggressive behavior and bullying by enhancing students' emotional management and social interaction skills. In the present study, SEL principles are embedded within PE activities, enabling students to develop key competencies such as empathy, self-regulation, and relationship-building in an experiential context. These competencies are widely recognized as essential for fostering positive peer relationships and preventing bullying, providing a strong theoretical justification for the model's design (Sari & Pratama, 2024).

Chen et al., (2024) also emphasized that strong SEL competencies function as protective factors against bullying victimization and problematic online behaviors. Reflecting these findings, the proposed PE model highlights the pivotal role of teachers in recognizing bullying behaviors while simultaneously nurturing a supportive social climate. The effectiveness of the model depends largely on teachers' capacity to integrate SEL concepts into PE instruction, thereby creating an environment in which students feel respected, supported, and emotionally secure.

Although research by Shao et al., (2025) focused on mathematics education, their findings suggest that technology-enhanced learning environments such as those incorporating gamification and metacognitive strategies can increase student motivation and reduce bullying-related behaviors. These insights may be transferable to PE contexts, where the integration of technology through gamified or interactive activities could further enhance engagement and reinforce prosocial values related to bullying prevention.

The importance of rigorous evaluation in bullying prevention initiatives has been emphasized by Gaffney et al., (2019) who argue that school-based programs must be supported by empirical evidence to ensure their effectiveness. In line with this recommendation, the PE-based model proposed in this study incorporates systematic evaluation procedures to assess its impact on bullying reduction. Continuous assessment is essential for refining the model and generating data-driven insights that can inform future interventions.

A positive school climate has also been identified as a key factor in reducing bullying and promoting student success La Salle-Finley et al., (2024) The proposed PE model contributes to the development of such a climate by emphasizing supportive interactions, mutual respect, and emotional safety within PE lessons. By fostering an environment in which students feel valued and connected, the model supports collaborative behaviors and reduces the likelihood of bullying.

In addition to addressing traditional forms of bullying, the model also responds to concerns related to cyberbullying. As noted by (Chen et al., 2024) SEL competencies play a critical role in helping students navigate online interactions and resist digital forms of aggression. By equipping students with social and emotional skills applicable in both physical and virtual contexts, the proposed model offers a comprehensive approach to bullying prevention in contemporary educational settings.

Overall, the PE-based bullying prevention model developed in this study demonstrates strong potential for creating safer and more supportive learning environments for primary school students. By integrating collaborative physical activities with SEL principles, the model addresses both the behavioral and emotional dimensions of bullying. Evidence from prior research, including studies by (Jiménez-Barbero et al., 2020), (García-Hermoso et al., 2020) and (Benítez-Sillero et al., 2021), ends support to the effectiveness of this integrated approach.

The successful implementation of the model depends on the active engagement of PE teachers, the use of evidence-based evaluation strategies, and the cultivation of a positive school climate. Future research is needed to examine the long-term impact of the model across diverse educational contexts. Nevertheless, the proposed framework offers a meaningful contribution to educational research, policy, and practice, particularly in advancing PE-based strategies for bullying prevention.

CONCLUSION

This study proposes a physical education (PE) model for bullying prevention aimed at primary school students, integrating physical activities with social-emotional learning (SEL) to create a safe and inclusive school environment. By focusing on the development of social skills, empathy, and conflict resolution, the model effectively addresses bullying behaviors. The findings suggest that involving PE teachers in bullying prevention and incorporating SEL into PE activities helps students engage in positive interactions and manage peer relationships more effectively. While the model shows impact potential, further research is necessary to evaluate its long-term impact and adaptability in diverse educational settings. Overall, this PE-based bullying prevention model offers a practical solution to fostering safer, more supportive environments in primary schools and provides valuable insights for educational policy and bullying prevention programs.

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