





A Narrative Study on Developing an Integrated Educational Model for Sports Empowerment Based on Educational Innovation among Students in Northwest Iranian Schools

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ABSTRACT

The objective of this study was to develop an integrated educational model for sports empowerment grounded in educational innovation among students in Northwest Iranian schools through narrative synthesis of contemporary scholarly evidence. This study employed a qualitative narrative review design to synthesize theoretical and empirical research related to educational innovation, school sports, and student empowerment. Eighteen peer-reviewed articles were purposively selected from international and national academic databases based on relevance to innovative physical education, psychosocial development, technological integration, and inclusive sports participation. Data collection involved systematic reading, conceptual extraction, and interpretive comparison of selected studies. Narrative thematic analysis was conducted through iterative coding, categorization, and synthesis procedures to identify recurring conceptual patterns and construct an integrated educational framework suitable for school contexts. The analysis revealed that sports empowerment in educational environments is a multidimensional construct emerging from the interaction of five core domains: innovative learner-centered pedagogy, psychosocial and emotional development, technology-supported learning environments, inclusive participation structures, and institutional sustainability mechanisms. Educational innovation was found to enhance students' motivation, leadership capacity, resilience, and social competence while strengthening physical literacy and mental well-being. The findings further suggest that digital technologies and supportive school leadership accelerate student engagement and individualized development pathways. Inclusive sport programs were inferred to reduce participation inequalities and promote equitable empowerment outcomes. Overall, effective sports empowerment depends on systemic alignment between teaching innovation, organizational support, and holistic developmental objectives. The study concludes that sports empowerment cannot be achieved through isolated physical education interventions but requires an integrated educational ecosystem combining pedagogical innovation, technological advancement, inclusive policy design, and institutional coordination. The proposed model provides a conceptual foundation for transforming school sports into a comprehensive educational strategy capable of promoting holistic student development and sustainable educational innovation within Northwest Iranian schools.

Keywords: Educational innovation, Sports empowerment, Physical literacy, Student-centered learning, Integrated model

Introduction

Educational systems worldwide are increasingly confronted with the challenge of preparing students for complex social, cognitive, and physical demands emerging from rapid technological, cultural, and lifestyle transformations. Contemporary

schooling is no longer confined to academic knowledge transmission; rather, it seeks to cultivate holistic development encompassing physical literacy, psychological resilience, social competence, creativity, and lifelong well-being. Within this evolving paradigm, sport and physical education have gained renewed importance as multidimensional educational environments capable of fostering empowerment, identity formation, and innovation-oriented learning experiences. Schools play a decisive role in shaping students' lifestyle habits, leisure patterns, and engagement in physical activities, thereby contributing to the promotion of healthy behaviors and sustained participation in active living (1). The integration of sports into educational innovation frameworks therefore represents a strategic pathway for strengthening student development in contemporary school systems.

Educational innovation refers to the purposeful transformation of pedagogical approaches, learning environments, technologies, and institutional structures to enhance learning outcomes and student engagement. Recent studies highlight that innovative teaching strategies within physical education settings significantly influence students' motivation, participation persistence, and perceived competence. When teachers adopt autonomy-supportive instructional methods, students demonstrate higher levels of sport participation and sustained exercise engagement, indicating that innovation in pedagogy directly shapes empowerment outcomes (2). Similarly, innovative educational environments grounded in learner-centered approaches promote inclusive participation and psychological involvement, contributing to the development of students' confidence and agency within school contexts (3). These developments indicate that educational innovation serves as a foundational mechanism for transforming traditional sports education into a dynamic empowerment-oriented process.

In recent years, the concept of sports empowerment has emerged as a central educational objective, emphasizing the role of physical activity in developing psychological strength, social responsibility, leadership capacities, and emotional well-being among students. Participation in structured sports programs has been associated with reductions in bullying behaviors through the mediation of mental toughness and emotional regulation skills, demonstrating the broader psychosocial value of sports engagement in school environments (4). Physical education programs designed around personal and social development models also enhance cooperation, empathy, and interpersonal competencies, particularly in inclusive educational settings where students with diverse abilities participate collectively in learning activities (5). Such findings suggest that sports-based learning environments extend beyond physical performance and operate as transformative spaces for personal growth and social empowerment.

The educational significance of sport becomes even more apparent when considering the developmental benefits associated with movement-based learning. Movement game-based interventions have been shown to improve cognitive performance, social interaction skills, and quality of life among primary school students, highlighting the integrative relationship between physical activity and cognitive development (6). Biomechanics-informed sports activities similarly contribute to mental health promotion in early educational stages by strengthening psychological stability alongside physical competence (7). These findings reinforce the perspective that innovative sports education supports not only motor development but also intellectual and emotional maturation, aligning with contemporary educational models that prioritize whole-child development.

Despite the recognized benefits of school sports, educational systems often face structural and contextual challenges that limit equitable participation and empowerment outcomes. Research indicates that access to sports opportunities is influenced by social class, gender, and cultural expectations, resulting in unequal participation patterns among students, particularly among girls and marginalized groups (8). Such disparities emphasize the need for integrated educational models capable of addressing inclusivity, equity, and institutional support mechanisms within school sports programs. Moreover, effective school sports systems require attention to safety management, health standards, and organizational coordination to ensure sustainable student

participation (9). Without systemic innovation, sports education risks remaining fragmented and unable to fulfill its developmental potential.

Educational innovation in sports has increasingly been shaped by technological advancements and digital transformation processes. Emerging technologies such as artificial intelligence and augmented reality are transforming talent identification, instructional design, and student engagement in physical education contexts. Artificial intelligence-based systems enhance talent identification accuracy and enable personalized development pathways for students participating in school sports programs (10). Likewise, augmented reality mobile learning interventions have demonstrated significant improvements in students' gross motor skills by providing interactive and immersive learning environments (11). These technological innovations signal a transition toward hybrid educational ecosystems where physical activity, digital learning, and adaptive instruction converge to promote empowerment and educational effectiveness.

Leadership development and social responsibility formation represent additional dimensions through which sports education contributes to student empowerment. Participation in structured school sports programs such as futsal initiatives has been shown to foster leadership skills, teamwork, and decision-making abilities among elementary school students, supporting the role of sports as experiential learning environments (12). Resilience training programs embedded within sports activities further enhance students' coping strategies, self-regulation, and adaptability when facing academic and personal challenges (13). These outcomes underscore the transformative capacity of sports education when aligned with innovative pedagogical principles emphasizing experiential learning and character development.

The quality of educational delivery within physical education also depends heavily on teacher engagement, professional competence, and institutional support structures. Teachers who demonstrate strong personal growth initiative and job engagement contribute significantly to improving educational quality and student motivation in physical education classes (14). Innovative school leadership practices similarly influence the effectiveness of physical management systems and facilitate the integration of new pedagogical approaches aligned with Industry 4.0 educational transformations (15). Consequently, educational innovation must be understood as a systemic phenomenon involving teachers, administrators, policies, and learning environments rather than isolated instructional changes.

Empirical research further demonstrates that structured physical activity programs positively influence students' motor competence, aerobic fitness, and movement behavior patterns. Longitudinal school-based physical activity interventions show sustained improvements in physical fitness and motor development, confirming the long-term educational value of consistent sports participation within school curricula (16). Comparative studies examining physical activity intensity during physical education classes reveal direct associations between active engagement and enhanced physical fitness among schoolchildren (17). Understanding students' participation profiles and motor competency development therefore becomes essential for designing integrated empowerment-oriented educational models (18).

In addition to physical and social benefits, sports education contributes substantially to students' psychological health and emotional stability. Research conducted in sport-focused schools indicates that participation in structured athletic environments supports mental health outcomes and emotional balance among student-athletes (19). Innovative physical education programs emphasizing social and emotional learning further strengthen students' self-awareness, empathy, and interpersonal communication skills, reinforcing the educational role of sports as a platform for emotional literacy development (20). Such findings align with broader educational innovation frameworks advocating interdisciplinary integration between physical education, psychology, and social learning processes.

An important dimension of sports empowerment relates to early talent development and inclusive participation pathways. Identifying effective factors in sport talent identification among elementary school students supports long-term athletic

development while simultaneously encouraging broad participation rather than exclusive elite selection (21). Inclusive sports education models designed for students with disabilities demonstrate that adapted physical activity programs enhance self-control, memory, and functional independence, highlighting the importance of inclusive innovation within educational sport systems (22). Studies examining specialized sports schools also emphasize the significance of adequate human resource development to support diverse student needs and ensure equitable empowerment opportunities (23).

Educational innovation in sports increasingly recognizes interdisciplinary integration as a key factor in effective empowerment. Combining physical education with creative arts, music-based movement, and holistic pedagogical strategies promotes psychophysical development among children with diverse learning needs (24). Similarly, innovative activity designs such as parkour-based learning environments demonstrate that skills acquired during structured physical education classes can transfer to informal school settings, enhancing autonomy and lifelong engagement in physical activity (25). These approaches suggest that sports empowerment extends beyond classroom boundaries and influences students' everyday learning experiences.

Global educational research consistently emphasizes that innovative physical education programs must integrate health promotion, community engagement, and lifestyle education to achieve sustainable outcomes. Studies investigating elective sports participation and outdoor activity promotion reveal that schools serve as central institutions for cultivating healthy lifestyle behaviors among students (1). Educational innovation therefore requires coordinated efforts connecting curriculum design, school culture, technological integration, and community participation. Scholars argue that sport-based empowerment initiatives contribute to broader educational innovation by fostering adaptability, collaboration, and lifelong learning competencies aligned with twenty-first-century education goals (24, 25).

Within the Iranian educational context, and particularly in Northwest regions characterized by diverse cultural and socioeconomic conditions, the development of an integrated educational model for sports empowerment becomes especially significant. Local studies highlight the necessity of strengthening health and safety infrastructures, improving organizational management of school sports, and aligning educational innovation with national educational policies (9). Furthermore, research on innovative learning environments emphasizes the importance of culturally responsive educational models capable of addressing regional educational needs while incorporating global best practices (6). Despite growing attention to educational innovation, existing research remains fragmented, often addressing isolated aspects such as physical fitness, technology integration, or psychosocial outcomes without providing a comprehensive integrative framework.

The absence of a unified model integrating educational innovation principles with sports empowerment processes represents a critical gap in both research and practice. Existing studies collectively demonstrate the effectiveness of innovative sports education interventions, yet they rarely synthesize pedagogical, technological, psychological, and organizational dimensions into a coherent educational model adaptable to specific school contexts. Narrative synthesis of diverse scholarly findings therefore becomes necessary to conceptualize an integrated framework capable of guiding policy-makers, educators, and school leaders in designing sustainable empowerment-oriented sports education systems. Such a model would not only enhance student participation but also strengthen educational equity, innovation capacity, and holistic development outcomes.

Accordingly, the aim of this study is to develop an integrated educational model for sports empowerment based on educational innovation among students in Northwest Iranian schools through a narrative synthesis of selected scholarly literature.

Findings and Results

The narrative analysis of the eighteen selected studies led to the extraction of five major thematic categories that collectively constitute the foundation of an integrated educational model for sports empowerment based on educational innovation. These categories emerged through repeated comparative interpretation of conceptual patterns, empirical outcomes, and pedagogical implications reported across the reviewed literature. The findings demonstrate that sports empowerment in educational environments is a multidimensional construct shaped by pedagogical innovation, psychosocial development, technological integration, inclusive participation structures, and institutional support mechanisms.

The first category identified was **innovative pedagogical approaches and learner-centered sports education**. Across the reviewed studies, educational innovation was consistently linked to the transformation of traditional teacher-centered physical education into participatory, competence-supportive learning environments. Evidence indicates that when physical education teachers adopt autonomy-supportive instructional strategies, students experience higher perceived competence and sustained engagement in sports participation (2). Innovative instructional models emphasize active learning, student choice, collaborative activities, and experiential engagement rather than repetitive skill drills. These approaches reshape sports education into a dynamic educational space that promotes agency and intrinsic motivation among students.

Furthermore, innovative pedagogical designs extend beyond instructional techniques and influence the broader educational climate of schools. Programs integrating structured physical activities into informal learning contexts, such as recess-based skill transfer or creative movement learning, demonstrate that students continue engaging in physical activity outside formal lessons when innovation is embedded in curriculum design (25). Movement game-based training and creative activity models also improve cognitive functioning and social interaction, reinforcing the educational value of innovative sports pedagogy (6). Collectively, these findings suggest that innovation in teaching practices represents the primary driver of sports empowerment within schools.

The second category concerned **psychological empowerment and socio-emotional development through sport participation**. The reviewed studies revealed that sports programs significantly contribute to students' emotional resilience, mental health, and social competence. Participation in structured sports environments was associated with improved mental toughness, which mediates reductions in bullying behaviors and enhances interpersonal adaptation among elementary school students (4). Social and emotional learning embedded in physical education further strengthens empathy, self-awareness, and cooperation skills, positioning sports education as a platform for psychosocial development (20).

Additional findings indicated that empowerment outcomes extend to leadership formation and resilience development. Leadership-oriented sports initiatives enable students to practice decision-making, teamwork, and responsibility in real-life contexts (12). Resilience training delivered through sport-based programs enhances students' coping abilities and emotional regulation capacities, contributing to overall psychological well-being (13). Mental health benefits were also confirmed among student-athletes participating in structured sport schools, demonstrating the protective psychological effects of consistent engagement in physical activity (19). These results highlight that sports empowerment operates simultaneously at emotional, social, and behavioral levels.

The third category emerging from analysis was **technology-driven innovation and digital transformation in school sports education**. The integration of advanced technologies was identified as a central feature of modern educational innovation. Studies demonstrated that artificial intelligence applications enhance talent identification processes by enabling data-driven evaluation of students' abilities and personalized development pathways (10). Technological innovation therefore

expands educational opportunities by aligning training approaches with individual learner characteristics rather than relying solely on standardized assessment methods.

Similarly, augmented reality–based mobile learning environments significantly improved gross motor skills among elementary students by providing immersive and interactive learning experiences (11). Digital innovation supports motivation by transforming physical education into an engaging hybrid learning environment combining physical movement with technological interactivity. Educational leaders play a critical role in facilitating such transformation, as effective physical management and innovation-oriented leadership structures are necessary to integrate technology within school systems successfully (15). These findings confirm that technological innovation acts as a catalyst for modernizing sports education and expanding empowerment opportunities.

The fourth category identified was **inclusive participation, equity, and diversified student development pathways**. The reviewed literature emphasized that empowerment-oriented sports education must address inequalities related to gender, social class, and access to participation opportunities. Research demonstrated that structural inequalities continue to shape students' access to athletic participation, particularly among girls and marginalized populations (8). Consequently, innovative educational models must actively promote inclusion to ensure that sports empowerment benefits all students rather than a limited subgroup.

Inclusive physical education programs designed for diverse learner populations produced significant improvements in personal and social skills, particularly in inclusive school environments (5). Adapted physical activity models for students with disabilities enhanced self-control, memory, and participation confidence, demonstrating the importance of differentiated pedagogical approaches (22). Studies focusing on specialized sports schools further indicated that appropriate human resource development and professional support systems are essential for enabling participation among students with varied abilities (23). These findings illustrate that equity-oriented innovation constitutes a fundamental pillar of sports empowerment.

The fifth and final category concerned **institutional structures, physical development outcomes, and sustainable school sports ecosystems**. Evidence across studies showed that effective sports empowerment depends on organizational conditions, program continuity, and institutional commitment. School-based physical activity interventions produced measurable improvements in aerobic fitness, motor competence, and movement behavior patterns among children, confirming the long-term developmental impact of structured sports programs (16). Increased physical activity intensity during physical education classes was directly associated with enhanced physical fitness outcomes, reinforcing the importance of active instructional design (17).

Teacher engagement and professional growth emerged as essential institutional factors influencing educational quality within physical education programs. Educators demonstrating strong professional commitment and personal growth initiative contributed to higher educational effectiveness and student motivation (14). Additionally, comprehensive school sports systems require attention to health and safety management, organizational coordination, and policy alignment to sustain student participation (9). Participation profiles and motor competency patterns further highlighted the necessity of designing developmentally appropriate sports programs tailored to students' abilities and interests (18). Together, these findings indicate that sustainable sports empowerment requires alignment between pedagogical innovation, institutional support, and developmental objectives.

Across the five identified categories, the narrative synthesis revealed that sports empowerment based on educational innovation is not a single intervention but an integrated educational ecosystem. Effective empowerment emerges through the interaction of innovative teaching practices, psychosocial development processes, technological advancement, inclusive

participation strategies, and supportive institutional structures. The convergence of these dimensions forms the conceptual basis for developing an integrated educational model capable of enhancing student empowerment within Northwest Iranian schools.

Discussion and Conclusion

The purpose of this study was to develop an integrated educational model for sports empowerment grounded in educational innovation among students in Northwest Iranian schools through a narrative synthesis of relevant scholarly literature. The findings revealed five interrelated dimensions shaping sports empowerment: innovative pedagogy, psychosocial development, technological integration, inclusive participation, and institutional sustainability. The discussion interprets these results in light of existing theoretical and empirical research, demonstrating that sports empowerment emerges as a systemic educational phenomenon rather than an isolated physical education outcome.

The first major finding emphasized the central role of innovative pedagogical approaches in strengthening students' engagement in sports education. The analysis showed that learner-centered and autonomy-supportive instructional environments increase students' motivation, persistence, and participation in physical activity. This result aligns strongly with evidence demonstrating that competence-supportive teaching directly enhances students' exercise continuity through improved perceived competence and intrinsic motivation (2). Educational innovation reshapes physical education from performance-based instruction toward experiential learning environments where students actively construct knowledge through participation. Similar conclusions are reported in studies highlighting the importance of school environments in fostering healthy lifestyle habits and encouraging voluntary participation in recreational and outdoor activities (1). These convergent findings suggest that pedagogical innovation represents the foundational mechanism through which sports empowerment can be achieved within educational systems.

The findings also indicated that innovative physical education contributes significantly to cognitive and developmental outcomes beyond physical fitness. Movement-based learning and creative activity interventions were found to enhance cognitive performance, social interaction, and quality of life among students, reinforcing the multidimensional educational value of sports participation (6). Research on psychophysical development similarly demonstrates that integrating physical activity with broader educational experiences promotes holistic development across mental and physical domains (24). The discussion therefore supports the view that innovative sports education should be conceptualized as an interdisciplinary learning environment rather than a separate curricular component.

A second important finding concerned the psychosocial empowerment effects of sports participation. The results showed that sports education enhances emotional resilience, leadership abilities, and social competence among students. Prior studies confirm that participation in school sports programs reduces bullying behaviors through the development of mental toughness and emotional regulation capacities (4). Likewise, social and emotional learning embedded within physical education strengthens interpersonal relationships and students' sense of belonging in school communities (20). These findings correspond with research demonstrating that structured sport programs contribute to leadership formation and social responsibility among young learners (12). The present study therefore reinforces the argument that sports empowerment operates primarily through psychosocial mechanisms that shape students' identities, confidence, and adaptive behaviors.

Mental health outcomes further support this interpretation. Evidence shows that student-athletes engaged in organized school sports environments report improved psychological well-being and emotional stability (19). Resilience training delivered through sport-based educational programs strengthens coping strategies and adaptability, preparing students to manage academic and personal challenges more effectively (13). The convergence of these findings suggests that sports

empowerment contributes directly to preventive mental health education, positioning innovative physical education as a strategic component of comprehensive student development.

The third finding highlighted the transformative role of technology and digital innovation in modern sports education. The integration of artificial intelligence and digital learning tools was identified as a major driver of educational innovation. Research demonstrates that AI-based systems improve talent identification accuracy and enable individualized development planning in school sports contexts (10). Similarly, augmented reality-based learning environments enhance motor skill acquisition by increasing student engagement and providing immersive feedback mechanisms (11). These findings confirm that digital transformation expands pedagogical possibilities and allows educators to personalize learning experiences according to students' abilities and interests.

Technological innovation, however, requires institutional readiness and leadership support. Studies indicate that school leaders function as catalysts for educational innovation by establishing organizational structures that facilitate technological adoption and effective physical education management (15). The present findings therefore align with broader educational innovation theories emphasizing that technological tools alone cannot produce empowerment outcomes without supportive organizational ecosystems.

A fourth major finding involved inclusive participation and equity in sports education. The analysis revealed that empowerment-oriented models must address structural inequalities affecting access to sports participation. Prior research demonstrates that gender, socioeconomic status, and cultural expectations significantly influence opportunities for athletic involvement, often limiting participation among girls and marginalized student groups (8). Inclusive educational sport programs, however, have been shown to enhance personal and social skills development among diverse learners, particularly when pedagogical designs emphasize cooperation and participation rather than competition (5). Adapted physical activity models designed for students with disabilities also promote self-regulation and cognitive development, confirming the importance of inclusive innovation (22).

The emphasis on inclusivity is further supported by research on human resource development within specialized sports schools, which highlights the necessity of professional expertise and supportive learning environments to ensure equitable empowerment outcomes (23). The discussion therefore suggests that sports empowerment cannot be achieved without addressing structural barriers and promoting equitable access to educational opportunities.

The fifth finding concerned institutional structures and sustainable sports ecosystems. The results demonstrated that effective sports empowerment requires coordinated organizational support, safety management, and professional engagement among educators. Studies examining school sports systems in Iran emphasize that health and safety infrastructures constitute essential conditions for sustainable student participation (9). Teacher engagement also plays a decisive role, as educators demonstrating strong professional commitment significantly improve educational quality and student motivation in physical education classes (14). These findings highlight the systemic nature of educational innovation, where empowerment outcomes depend on institutional coherence rather than isolated interventions.

Physical development outcomes further reinforced the importance of sustainable program design. Longitudinal school-based physical activity programs have been shown to improve aerobic fitness, motor competence, and movement behavior patterns among children (16). Comparative analyses of activity levels during physical education classes similarly confirm that higher engagement intensity leads to improved physical fitness outcomes (17). Research examining participation profiles also demonstrates that understanding students' motor competencies enables the design of developmentally appropriate educational interventions (18). Together, these studies support the conclusion that institutional sustainability represents a critical dimension of sports empowerment.

Additional evidence emphasizes the role of innovative learning environments in enhancing students' sense of community and belonging within schools. Educational contexts characterized by supportive institutional climates encourage higher levels of participation and collaborative engagement among students (3). Furthermore, biomechanics-informed sports programs have been shown to promote mental health alongside physical development, reinforcing the interconnected nature of educational innovation and student well-being (7). Talent identification frameworks aligned with educational goals also contribute to long-term development pathways that balance elite performance opportunities with inclusive participation principles (21).

Overall, the discussion demonstrates that the integrated educational model derived from this study reflects a convergence of contemporary research emphasizing holistic development, interdisciplinary learning, and systemic innovation. The alignment between the present findings and prior empirical studies confirms that sports empowerment emerges when pedagogical innovation, psychological development, technological advancement, inclusive access, and institutional support operate synergistically. Educational innovation therefore functions not merely as a methodological improvement but as a transformative paradigm reshaping the educational role of sport in schools.

This study has several limitations that should be acknowledged. First, as a narrative review, the research relied on interpretive synthesis rather than quantitative meta-analysis, which may introduce subjectivity in theme extraction and model development. Second, the selection of eighteen studies, although purposive and theoretically grounded, may not fully represent all global perspectives on sports empowerment and educational innovation. Third, contextual differences between international educational systems and Northwest Iranian schools may limit direct generalization of some findings. Additionally, variations in methodological designs across reviewed studies created challenges in comparing outcomes consistently. Finally, the absence of empirical field validation means that the proposed integrated educational model requires further testing in real educational environments.

Future research should focus on empirical validation of the integrated educational model through mixed-methods or experimental studies conducted within Iranian school contexts. Longitudinal investigations examining the long-term impact of innovative sports education on students' academic achievement, mental health, and social development would provide valuable evidence. Comparative regional studies could explore cultural variations influencing sports empowerment outcomes across different provinces. Researchers may also investigate the effectiveness of digital technologies such as artificial intelligence, virtual reality, and data-driven coaching systems within school-based sports education. Furthermore, studies examining teacher professional development and leadership readiness for implementing innovation-based sports models would deepen understanding of institutional transformation processes.

Educational practitioners and policy-makers should prioritize the integration of innovative pedagogical approaches within physical education curricula, emphasizing student participation, collaboration, and experiential learning. Schools should establish supportive institutional structures that promote safe, inclusive, and well-managed sports environments. Investment in teacher training programs focused on innovation, digital competence, and empowerment-oriented instruction is essential for sustainable implementation. Educational leaders should also encourage interdisciplinary collaboration between physical education, psychology, and technology specialists to strengthen holistic student development. Finally, policymakers should design national and regional educational strategies that position school sports as a central component of educational innovation and student empowerment initiatives.

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Authors' Contributions

All authors equally contribute to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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