

Teachers' perspectives on the factors influencing the effectiveness of physical education instruction in urban schools

Nguyen Cat Le^a | Hai The Hoang^b ✉ | Tinh The Nguyen^a | Dao Thi Bich Le^c | Nghia Dinh Duy Nguyen^a

^aSchool of Physical Education, Hue University, Hue City, Vietnam.

^bFaculty of Psychology – Education - Social Work, The University of Da Nang, University of Science and Education, Da Nang City, Vietnam.

^cDepartment of Academic and Students' Affairs, Hue University, Hue City, Vietnam.

Abstract Physical education (PE) plays a crucial role in promoting children's physical health, psychological well-being, and overall development. However, the effectiveness of PE instruction is influenced by multiple interrelated factors, and teachers' perceptions of these influences remain insufficiently explored, particularly in urban school contexts. This study aimed to examine teachers' perceptions of the extent to which student-related, environmental, organizational, and teacher-related factors influence the effectiveness of PE instruction. A descriptive cross-sectional design was employed involving 82 PE teachers working in urban primary schools. Data were collected using a structured self-administered questionnaire consisting of four dimensions: student-related factors, facilities and learning environment, training organization, and teacher-related factors. Participants rated each factor using a 4-point Likert scale ranging from 1 (very low influence) to 4 (very high influence). Descriptive statistics, including frequencies, percentages, means (M), and standard deviations (SD), were used to analyze the data. The findings indicated that student-related factors were perceived as the most influential determinants of instructional effectiveness. Specifically, students' health (M = 3.62, SD = 0.70) and students' spirit, attitude, and enthusiasm for learning (M = 3.51, SD = 1.00) received the highest ratings. Among organizational factors, instructional forms and methods were considered moderately influential (M = 3.01, SD = 1.32), while teacher competence received a moderate rating (M = 2.77, SD = 1.48). In contrast, structural factors such as the number of students (M = 1.54, SD = 1.59) and the number of teachers (M = 1.89, SD = 1.17) were perceived as having the least influence on PE effectiveness. These findings suggest that teachers place greater importance on learner-centered and psychosocial factors than on structural conditions when evaluating instructional effectiveness. The study highlights the importance of promoting students' health, motivation, and engagement while supporting teachers through effective pedagogical practices and conducive learning environments.

Keywords: sports participation, instructional effectiveness, teacher perceptions, student factors, teaching methods

1. Introduction

Physical education (PE) is essential for enhancing students' physical health, psychological well-being, and social development in educational institutions globally. In addition to its conventional emphasis on motor skills and physical fitness, modern physical education is widely seen as a vital component of comprehensive education, promoting enduring physical activity habits, health literacy, collaboration, and emotional resilience (Aslam, Shi, & Zhao, 2025; Huang, 2024). International organizations such as UNESCO have underscored that high-quality physical education is a vital element of inclusive and equitable education, especially given the increasing prevalence of sedentary lifestyles and decreasing physical activity among children and adolescents (McLennan & Thompson, 2015; WHO, 2021).

Despite its acknowledged significance, the efficacy of physical education instruction differs markedly across educational settings. Variations in student attributes, educator proficiency, teaching strategies, institutional circumstances, and environmental assets can influence the quality and results of physical education programs (Burson et al., 2021; Lackney, 1994; Metzler, 2017). Identifying the factors deemed most influential by teachers, the principal agents of instructional delivery, is essential for enhancing pedagogical practice and guiding educational policy.

The efficacy of physical education instruction can be comprehended through ecological and sociocultural models of teaching and learning, which highlight the interplay of learners, educators, and contextual factors (Harvey et al., 2020; Leriche et al., 2016). These models indicate that instructional efficacy is not dictated by a singular factor but arises from the dynamic interaction of student preparedness, educator methodologies, curriculum structure, and institutional backing. Thus, analyzing

educators' opinions of these characteristics offers significant insight into the construction and negotiation of instructional success in actual school environments.

Student-related characteristics have consistently been emphasized in related research as significant influences on the success of physical education. Students' physical health, fitness level, and developmental readiness significantly influence their ability to engage actively and derive benefits from physical education instruction (Kohl III et al., 2013; Pangrazi & Beighle, 2019). Furthermore, students' motivation, attitudes, and emotional engagement are crucial to learning in physical education since participation is frequently voluntary and intrinsically linked to enjoyment and self-perception (Ensrud-Skraastad & Haga, 2020; Wang et al., 2016). Studies based on self-determination theory indicate that students who perceive autonomy, competence, and social support are more inclined to engage meaningfully in physical education and cultivate favorable attitudes about physical activity (Ennis, 2011; Haerens et al., 2018; Zhang et al., 2011).

Conversely, conventional performance-oriented viewpoints that prioritize pupils' athletic prowess or physical aptitude have come under growing scrutiny. Current physical education scholarship posits that an overemphasis on athletic performance may alienate less proficient pupils and hinder inclusive educational objectives (Chandler et al., 2007). A contemporary curriculum promotes developmentally suitable, inclusive methodologies that emphasize participation, well-being, and individual advancement rather than competitive success. Teachers' perceptions of the significance of students' health, motivation, and athletic ability reflect overarching pedagogical orientations in physical education practice (McEvoy, Heikinaro-Johansson, & MacPhail, 2017; Valtonen et al., 2014).

In addition to student characteristics, infrastructure and environmental factors are frequently identified as structural determinants of physical education success. Proper facilities, equipment, and secure learning settings are crucial for providing varied and stimulating physical activities (Lackney, 1994). Research across several locations has indicated that insufficient infrastructure, limited access to equipment, and overcrowded environments present considerable obstacles to physical education instruction, especially in urban and resource-limited contexts (Singh, 2024). Research has indicated that educators frequently exhibit innovative adaptability to environmental constraints, altering activities and instructional methods to preserve the quality of lessons (Parsons et al., 2018).

The class size and student-teacher ratios are significant environmental factors. Extensive class sizes may diminish opportunities for personalized feedback, heighten safety hazards, and restrict student involvement, especially in physically intensive activities (Ehrenberg et al., 2001). However, the degree to which educators regard class size as a significant limitation may differ on the basis of their experience, classroom management ability, and institutional standards. Examining educators' views of these characteristics helps elucidate how structural restrictions are experienced and normalized in practice.

The structure of instruction, encompassing training content, pedagogical approaches, scheduling, and evaluative techniques, is a crucial aspect of physical education efficacy. Pedagogical research has continuously shown that instructional methods, specifically, the delivery of content, significantly influence student engagement and learning results (Baragash & Al-Samarraie, 2018; Delialioğlu, 2012). Model-based approaches to physical education, including cooperative learning, sport education, and teaching games for understanding, have demonstrated superior outcomes in terms of motivation, social interaction, and skill development relative to conventional, teacher-centered methodologies (Silva et al., 2021; Zhou, Wang, & Li, 2023).

Simultaneously, physical education curricula in numerous school institutions are centrally regulated and standardized, constraining instructors' autonomy in subject selection or adaptation. When curricular content is viewed as immutable, educators may prioritize instructional methodologies and classroom dynamics over the subject itself (Enyedy et al., 2006). Comprehending teachers' perceptions of the impact of training organization aspects, including content, techniques, time allocation, and evaluation, is essential for aligning curriculum design with pedagogical reality.

Factors associated with teachers significantly influence educational efficacy. Comprehensive studies in general education and physical education have underscored the significance of teacher proficiency, pedagogical topic knowledge, classroom management abilities, and interpersonal attributes (König & Kramer, 2016; McCormack, 1997; Herold & Waring, 2017; Schnitzius et al., 2021). In physical education settings, the capacity of educators to inspire students, maintain safety, tailor instruction to varied abilities, and foster supportive learning environments is crucial (Huang, 2024; Metzler, 2017). The professional attributes of teachers, such as enthusiasm, commitment, and reflective practice, are associated with increased student involvement and satisfaction in physical education classes (Derri et al., 2015).

The significance of formal qualifications and certificates remains disputed. Although teacher education and certification are crucial for establishing fundamental professional norms, empirical research indicates that qualifications alone do not ensure instructional efficacy (Boyd et al., 2007). Rather, continuous professional growth, teaching experience, and contextual support seem to have a more substantial impact on the cultivation of good practices. Investigating educators' views on the significance of qualifications compared with practical ability can thus guide teacher education and professional development programs.

While teacher education and certification are essential for setting basic professional standards, empirical evidence demonstrates that qualifications alone do not guarantee instructional effectiveness (Darling-Hammond et al., 2005). Instead, on-going professional development, teaching experience, and contextual support appear to exert a more significant influence

on fostering effective practices. Examining educators' perspectives on the importance of qualifications relative to practical skills might inform teacher education and professional development initiatives.

Third, empirical information from certain educational contexts, especially urban school environments, is still scarce. Urban schools frequently encounter distinct obstacles associated with spatial limitations, class size, and heterogeneous student demographics, which may influence educators' perspectives and pedagogical approaches differently than they do in rural or suburban settings (Conchas & Rodriguez, 2007). Contextual studies are crucial for formulating targeted and viable interventions to enhance the quality of physical education.

This study aims to investigate teachers' perspectives regarding the degree to which different factors affect the efficacy of physical education instruction. The study specifically examines four categories of components: student-related factors, facilities and environmental circumstances, training organization, and teacher-related factors. This study aims to determine the most essential aspects influencing instructional effectiveness in an urban school context by systematically comparing teachers' perceptions of these areas.

This study contributes to the literature by emphasizing instructors' perceptions and highlighting the experiential and practical aspects of physical education training. Teachers' opinions include not only their professional assessments but also the translation of overarching educational policies and institutional circumstances into classroom practices. The results of this study are anticipated to guide teacher training, professional development, and policy activities designed to improve the quality and efficacy of physical education instruction.

2. Methods

2.1. Participants

The study sample included 82 in-service primary school educators who are currently in an urban institution. All participants were employed in urban educational environments (100%), with no representation from rural or countryside areas. This uniform school-location profile illustrates the institutional framework of the data collection (Table 1).

Table 1 Overview of participants.

<i>Characteristics of subject</i>		Frequency (n)	Percent (%)
School location	Urban	82	100.0
	Countryside	0	0.0
	Rural	0	0.0
Gender	Male	53	64.6
	Female	29	35.4
Seniority	Under 10 years	13	15.9
	10-20 years	47	57.3
	20-30 years	12	14.6
	Over 30 years	10	12.2
Educational level	College	0	0.0
	University	82	100.0
	Postgraduate	0	0.0
The grade that the subject is responsible for teaching	Grade 3	10	12.2
	Grade 4	41	50.0
	Grade 5	31	37.8
Total		82	100.0

The sample included 53 male teachers (64.6%) and 29 female teachers (35.4%). The participants exhibited considerable professional expertise overall. Specifically, 47 teachers (57.3%) indicated having 10 to 20 years of teaching experience, constituting the largest group. Furthermore, 13 instructors (15.9%) had fewer than 10 years of experience, 12 teachers (14.6%) had 20–30 years of teaching experience, and 10 teachers (12.2%) had more than 30 years of professional tenure. All the participating educators possessed a university degree (100%), and none indicated holding a college diploma or postgraduate qualification. This signifies a consistent educational background throughout the sample. With respect to teaching responsibilities, participants were instructed on upper primary classes during the data collection period. In particular, 10 teachers (12.2%) were assigned to Grade 3, 41 (50.0%) to Grade 4, and 31 (37.8%) to Grade 5. A total of 82 full and valid surveys were collected and used in the final statistical analyses.

2.2. Measurements

Data were gathered through a structured self-administered questionnaire aimed at evaluating instructors' perceptions of factors affecting the efficacy of physical education training. The questionnaire had items categorized into four primary domains: (1) student-related aspects, (2) elements pertaining to facilities and the learning environment, (3) factors associated with training organization, and (4) teacher-related factors. These domains were established following an examination of the

literature about the efficacy of physical education and the quality of instruction. Participants were requested to evaluate the degree to which each aspect impacted the efficacy of their physical education instruction on a Likert-type scale. All items were rated on a 4-point Likert scale (1 = very low influence, 2 = low influence, 3 = moderate influence, and 4 = high influence). Elevated scores signified an increased perceived degree of influence. Descriptive statistics, comprising the mean (M) and standard deviation (SD), were employed to encapsulate the instructors' responses for each item and factor group. The questionnaire was evaluated for clarity and relevance before data collection to verify that the items were comprehensible and suitable for the study context.

2.3. Procedures

Data collection occurred throughout the specified survey period after consent was obtained from the appropriate school administration. The participants were informed of the study's objective, the voluntary aspect of their involvement, and the confidentiality of their responses. All participants provided informed consent before data collection commenced. The questionnaire was administered to physical education instructors at the chosen school and completed individually. Participants were directed to provide truthful responses grounded in their professional experiences in physical education instruction. Completed questionnaires were verified for thoroughness, and only fully completed responses were incorporated into the final dataset for analysis. A total of 82 valid surveys were preserved for statistical analysis.

2.4. Data Analysis

The data were analyzed using statistical software. Descriptive statistical techniques were utilized to encapsulate participants' demographic attributes and their judgments regarding the determinants of physical education instruction efficacy. Frequencies and percentages were employed to characterize categorical variables, whereas means (M) and standard deviations (SD) were computed for all measurement items. The findings were displayed in a tabular format to enable comparisons among factor groups and to discern patterns in instructors' judgments. The research concentrated on evaluating the comparative significance of mean scores to ascertain which elements were seen as having a greater or smaller impact on instructional efficacy. All analyses were performed at a descriptive level, aligning with the exploratory objective of the study.

3. Results

Table 2 illustrates educators' perspectives of the degree to which different elements impact the efficacy of physical education training. The results demonstrate significant variance in perceived effect across aspects pertaining to students, facilities and the environment, training organizations, and educators.

Table 2 The extent to which the following factors influence the effectiveness of physical education instruction.

Factors	M	SD
Factors related to students		
Student' health	3.62	0.70
Students' spirit, attitude, and enthusiasm for learning.	3.51	1.00
Understanding students' physical education and sports activities.	3.01	1.32
Students' athletic abilities	2.65	1.57
Factors related to facilities and environment		
Training location	2.88	1.16
Facilities, equipment, and training aids.	2.89	0.93
Training environment	2.63	1.11
Number of students	1.54	1.59
Factors related to training organization		
Training content	2.01	1.45
Forms and methods of training	3.01	1.32
Timing, training time	2.88	1.16
Checking and evaluating learning outcomes	2.51	1.33
Factors related to teachers		
Number of teachers	1.89	1.17
Teacher's qualifications	2.38	1.66
Teacher's qualities	2.65	1.57
Teacher's competence	2.77	1.48

Note: M, mean; SD, standard deviation.

Among the criteria related to students, health attained the highest mean score (M = 3.62, SD = 0.70), suggesting that educators regarded students' physical condition as the most significant determinant of the efficacy of physical education instruction. This was succeeded by students' spirit, attitude, and passion for learning (M = 3.51, SD = 1.00), indicating that motivational and attitudinal factors significantly contribute. Conversely, students' comprehension of physical education and

sports activities had a considerable degree of influence ($M = 3.01$, $SD = 1.32$), although students' athletic capabilities were regarded as less impactful ($M = 2.65$, $SD = 1.57$). The comparatively larger standard deviations for these latter factors indicate substantial diversity in teachers' judgments. The relatively large standard deviations observed for these variables indicate considerable heterogeneity in teachers' perceptions regarding the influence of student-related factors.

With respect to the elements associated with facilities and the learning environment, the effects of facilities, equipment, and training aids ($M = 2.89$, $SD = 0.93$) and training location ($M = 2.88$, $SD = 1.16$) on instructional effectiveness were regarded as moderate. The training setting resulted in a somewhat reduced mean score ($M = 2.63$, $SD = 1.11$). The quantity of pupils was assessed as the least impactful element in this category ($M = 1.54$, $SD = 1.59$), despite significant variability, reflecting differing instructor perspectives.

In terms of the organizational elements affecting training, the forms and techniques of training were assessed to have a modest effect ($M = 3.01$, $SD = 1.32$), similar to students' comprehension of physical education. Timing and training duration ($M = 2.88$, $SD = 1.16$) and the assessment of learning outcomes ($M = 2.51$, $SD = 1.33$) were regarded as exerting a modest to moderate effect. The training content obtained a mean score of 2.01 ($SD = 1.45$), indicating that it was deemed less essential than instructional methods or organizational timeliness.

Ultimately, for teacher-related aspects, teacher competence ($M = 2.77$, $SD = 1.48$) and teacher attributes ($M = 2.65$, $SD = 1.57$) were regarded as exerting a modest influence on instructional effectiveness. Teacher credentials had a diminished mean score ($M = 2.38$, $SD = 1.66$), whereas the quantity of instructors was assessed as having the least impact ($M = 1.89$, $SD = 1.17$). The considerable standard deviations among these measures indicate significant variability in teachers' perceptions.

Factors associated with students' health and learning attitudes were regarded as having the most significant impact on the efficacy of physical education instruction, whereas structural factors, such as class size and instructor quantity, were deemed less influential.

4. Discussion

This study offers detailed insights into instructors' perspectives of the elements affecting the efficacy of physical education training. The findings suggest that student-related characteristics, especially health status and learning attitudes, are regarded as the most significant predictors of instructional efficacy. This outcome underscores the inherently learner-centered essence of physical education, wherein students' physical preparedness and psychological involvement constitute the basis for significant participation and learning. Previous studies have repeatedly shown that students' physical health significantly influences their motor performance, endurance, and capacity to participate actively in physical education classes, consequently impacting both immediate learning results and long-term physical activity patterns (Cook & Kohl III, 2013; Norris et al., 2020; Pangrazi & Beighle, 2019).

Students' motivation, excitement, and learning attitudes were assessed as significantly influential, underscoring the pivotal role of emotional and motivational aspects in physical education. Self-determination theory posits that students who experience satisfaction, autonomy, and competence in educational settings are more inclined to exhibit prolonged engagement and persistence (Earl et al., 2017). In physical education contexts, motivation has been demonstrated to predict participation levels, skill acquisition, self-confidence, and the propensity to engage in physical activity outside of school hours (Taylor et al., 2010; Wang et al., 2002). The significance of these aspects from the perspective of teachers indicates an instructional approach that prioritizes students' internal states and learning experiences rather than solely technical or performance-based results.

Notably, students' athletic capabilities were regarded as less impactful than their health and motivation were. This discovery corresponds with modern viewpoints that regard physical education as inclusive and developing rather than exclusive or elitist. The contemporary physical education curricula prioritize comprehensive development, health enhancement, and sustained physical exercise over competitive success or talent recognition (Huang, 2024; Penney & Jess, 2004). Teachers' diminished focus on inherent athletic ability may indicate a dedication to equity, inclusiveness, and varied education, particularly in diverse classes where children display significant disparities in physical competence.

The findings indicate that training venues, apparatuses, and environmental circumstances were regarded as exerting a moderate effect on instructional efficacy. Previous studies have identified insufficient facilities and substandard infrastructure as significant obstacles to quality physical education delivery, especially in developing or resource-limited contexts (Abdulla, Whipp, & Teo, 2022; Idris et al., 2025). However, the moderate ratings observed in this study imply that teachers may have adjusted their instructional practices to accommodate the prevailing conditions. This adaptation may entail altering activities, streamlining equipment usage, or employing improvisation to ensure class continuity.

The quantity of students was seen as the least impactful element, although the standard deviation was very high. This discovery contradicts studies highlighting the detrimental impact of large class sizes on instructional quality, personalized feedback, and safety in physical education settings (Gross, 2009; Gross & Buchanan, 2014). One potential explanation is that educators have acclimated to substantial class numbers as an uncontrollable structural limitation, thus diminishing its perceived effect. Conversely, educators possessing robust classroom management abilities and experience may exhibit

confidence in sustaining instructional efficacy irrespective of class size, underscoring the mediating influence of teacher competence in structural circumstances (Stewart, 2014).

The findings indicate that the forms and techniques of training were regarded as more impactful than the training content itself. This finding indicates that educators emphasize pedagogical strategies, such as instructional methods, lesson organization, and student engagement techniques, over the mandated curriculum. This outcome aligns with educational research highlighting that instructional quality is influenced more by the design and facilitation of learning experiences than by material coverage (Lim & Morris, 2009). Active learning methodologies, cooperative learning, and student-centered models have demonstrated efficacy in improving engagement, skill acquisition, and enjoyment in physical education environments (Aslam, Shi, & Zhao, 2025; Bechter et al., 2019).

In contrast, the perceived minimal impact of training material may indicate the uniform and centrally governed character of physical education curricula, which frequently constrains teachers' autonomy and diminishes perceived heterogeneity in content significance. When curricular content is standardized and unchanging, educators may perceive it as a static condition rather than a dynamic element affecting efficacy. This discovery underscores the necessity of providing educators with enhanced curricular flexibility to tailor the curriculum to the needs, interests, and contextual realities of pupils (Jonker, März, & Voogt, 2020).

With respect to teacher-related characteristics, teacher competency and professional attributes were deemed somewhat relevant, but formal qualifications and teacher quantity received lower ratings. This pattern indicates that educators prioritize practical teaching abilities, classroom management, and interpersonal skills over formal qualifications alone (Stevenson, VanLone, & Barber, 2020). This finding corresponds with the substantial literature suggesting that pedagogical topic understanding, reflective practice, and relationship skills are more closely linked to instructional efficacy than are academic credentials or years of training (Slade et al., 2019; Zubizarreta, 2009). In physical education situations, the capacity of teachers to encourage students, guarantee safety, and modify instruction is essential for effective lesson execution.

The minimal focus on teacher qualifications may indicate a lack of variation in formal training levels among participants, given that all the teachers in the sample have university degrees. The impact of a uniform educational background may lessen than demonstrable skills and everyday teaching efficacy. The minimal perceived impact of teacher quantity may reflect an acceptance of current staffing standards or constrained expectations for institutional transformation, especially in public school systems where staffing choices are centrally regulated (Darling-Hammond et al., 2005; Jacob, 2007).

The findings indicate that teachers regard psychosocial and learner-centered elements as more impactful than structural or administrative conditions in assessing the success of physical education instruction (McMillian, 2024). This view signifies a wider transition in educational philosophy toward holistic, student-centered, and inclusive methodologies in physical education (Alhassan & Ibrahim, 2024). Nonetheless, the insufficient focus on structural limits such as class size, staffing, and facilities may indicate the normalization of systemic limitations, potentially obstructing long-term enhancements in the quality of physical education if unaddressed.

These findings substantiate ecological and sociocultural theories of teaching and learning, highlighting the dynamic interplay among learners, educators, and contextual factors (Griffiths & Soruç, 2021; John-Steiner & Mahn, 2003). Although educators have considerable influence on enhancing instructional efficacy, enduring advancements in physical education necessitate coherence between personal teaching methods and conducive institutional and governmental frameworks (Ward, 2013). Subsequent studies should investigate the interplay between teacher perceptions and objective measures of instructional quality and student results, along with the influence of contextual restrictions on pedagogical decision-making in physical education environments.

4.1. Implications

The findings of this study have significant implications for physical education practices, teacher professional development, and educational policy. The significant focus on student health and learning motivation indicates that effective physical education instruction should promote comprehensive student development above only performance-based results. Educational institutions must incorporate health promotion, injury prevention, and physical readiness evaluations into physical education curricula to guarantee that students are adequately equipped for meaningful engagement in instructional activities. Furthermore, physical education instructors should be motivated to implement instructional practices that promote enjoyment, autonomy, and prolonged engagement, in alignment with the tenets of self-determination theory.

The emphasis on instructional methods rather than content underscores the need for ongoing investment in pedagogical training for physical education instructors. Professional development programs must emphasize learner-centered instructional models, varied teaching methodologies, and inclusive practices that cater to students with varying physical abilities and motivational levels. Prioritizing pedagogical approaches to mere curriculum covering may improve instructional efficacy, especially in environments where curricular content is uniform and teacher agency is limited.

The moderate impact of teacher competency and professional attributes highlights the need to cultivate practical teaching abilities, classroom management skills, and interpersonal proficiency. Teacher education programs must prioritize experiential learning, reflective practice, and mentoring opportunities that enable educators to convert theoretical knowledge

into effective classroom applications. These findings indicate that assessing teacher effectiveness should encompass not only formal qualifications but also observed educational methods and student engagement results.

At the policy level, while structural variables such as facilities, class size, and staffing were regarded as less impactful, their significance should not be underestimated. Policymakers must acknowledge that while instructors can adjust to limitations, sustainable enhancements in physical education quality necessitate sufficient infrastructure, secure learning environments, and appropriate teacher–student ratios. Enhancing teachers' working environment may increase their ability to stably deliver quality, student-centered physical education instruction.

4.2. Limitations

Despite its contributions, this study has several limitations. First, the findings relied primarily on teachers' self-reported perceptions, which may be influenced by personal experiences or social bias. Future studies should incorporate observational data, student outcomes, or mixed method approaches to validate these perceptions. Second, the sample was limited to teachers from urban schools, restricting the generalizability of the findings to rural or disadvantaged contexts. Comparative studies across different educational settings are needed to better understand factors influencing PE effectiveness. Third, all participants held university degrees, resulting in limited variation in educational qualifications and potentially explaining the relatively lower perceived impact of teacher-related factors. Future research should include more diverse educational and professional backgrounds. Finally, the cross-sectional design does not permit causal inference. Longitudinal or experimental studies are needed to examine how changes in student, teacher, and contextual factors influence physical education outcomes over time. Because all participants were recruited from urban schools in a single geographical region, the findings may not be representative of PE teachers in rural, suburban, or other educational settings in Vietnam.

5. Conclusions

This study investigated educators' perceptions of the factors affecting the efficacy of physical education instruction and revealed that student-related factors, especially health status and learning motivation, were regarded as the most significant determinants of instructional effectiveness. Instructional methods and teachers' professional competency were deemed significant, but structural and organizational elements such as class size, personnel, and facilities were regarded as less impactful. These findings emphasize the pivotal importance of learner-centered and psychosocial aspects in physical education while also highlighting instructors' adaptability within prevailing institutional limitations. The findings indicate that improving the efficacy of physical education necessitates supportive learning environments, sufficient resources, and pedagogical strategies that emphasize students' physical preparedness, motivation, and meaningful participation in learning activities.

6. Declarations

6.1. Ethical considerations

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki and the guidelines of the American Psychological Association (APA). All procedures were implemented in line with ethical standards for research in the social sciences and humanities, as specified in Decision No. 1918/QĐ-BGDĐT (2023) issued by the Ministry of Education and Training, Vietnam.

6.2. Use of artificial intelligence (AI)

The authors declare that no generative artificial intelligence (AI) tools were used in the preparation, analysis, or writing of this manuscript.

6.3. Conflict of Interest

The authors declare no conflicts of interest.

6.4. Funding

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