

## RESEARCH ARTICLE

# A Social Psychology Perspective on Physical Education for Second-Year Students at Hanoi Capital University, Vietnam

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### ABSTRACT

This study analyzes the current status of Physical Education for second-year students at Hanoi Capital University through a social psychology lens. Four key areas were evaluated: (i) Physical Education program content, (ii) physical training facilities, (iii) use of exercises for general physical fitness development, and (iv) current physical fitness levels. The research employed a mixed-methods approach with 40 second-year male Physical Education majors. Results indicate that while the program meets basic requirements, it lacks components addressing psychological needs like autonomy, competence, and relatedness from Self-Determination Theory (SDT). Facilities are insufficient, and exercise usage fails to account for motivational differences and group dynamics. Physical fitness levels are average but limited in endurance and speed, correlating with low self-efficacy and social support. The study proposes integrating Social Identity Theory, Theory of Planned Behavior (TPB), and Social Cognitive Theory to enhance student engagement, motivation, and long-term physical activity habits.

**Keywords:** Physical Education; Social Psychology; Self-Determination Theory; Student Motivation; Physical Fitness

## 1. Introduction

Physical Education (PE) plays a vital role in holistic student development by integrating physical, cognitive, and social dimensions. From a social psychological perspective, PE functions not merely as a physical training context but also as a social environment in which interpersonal relationships, social norms, and group cohesion shape students' attitudes, motivation, and behavioral engagement. At Hanoi Capital University, PE implementation is constrained by several structural and psychological challenges, including inadequate facilities, low student motivation, and uneven participation across academic majors. This study reconceptualizes these challenges through key psychological constructs such as intrinsic versus extrinsic motivation and social facilitation mechanisms. Empirical evidence indicates that environmental and social barriers particularly academic pressure and limited access to facilities significantly restrict students' physical activity engagement.<sup>[1]</sup> Likewise, Hrušová et al<sup>[2]</sup> demonstrate that blended learning models incorporating activity-tracking technologies (e.g., Strava) enhance motivation by emphasizing non-competitive participation and personalized training pathways. Grounded in social psychology theories, the present study seeks to address existing gaps in motivation, social support, and curricular flexibility, thereby contributing to

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the development of a more sustainable and inclusive physical activity culture within university settings.

## 2. Material and methods

Self-Determination Theory (SDT): Focuses on fulfilling psychological needs (autonomy, competence, relatedness) to enhance intrinsic motivation. Theory of Planned Behavior (TPB): Examines how attitudes, subjective norms, and perceived behavioral control influence exercise behavior. Social Identity Theory: Explores how group membership and peer influence affect participation. Social Cognitive Theory: Emphasizes observational learning and social reinforcement in PE settings. In this study, we put forward some hypotheses about the current status of Physical Education for second-year students at Hanoi Capital University as follows:

*H1: PE program content influences students' self-efficacy and autonomous motivation (SDT). Wang & Zhang<sup>[3]</sup> argue that programs lacking core competencies (e.g., self-discipline, sports ethics) reduce engagement.*

Wang & Zhang<sup>[3]</sup> studied the teaching of Physical Education (PE) at the university level through the lens of "core competencies". They argued that the current PE program lacks depth in core competencies such as motor skills, health behaviors, and sports ethics, leading to the situation where university students have low professional sports skills and poor training awareness. The study showed that in order to improve the effectiveness of the PE program for second-year students (and other years), it is necessary to design the program with the following strategies: increasing awareness of lecturers and students, improving professional sports skills, and raising awareness of health behaviors. In the relationship between the subject program and physical education for second-year students, this study shows that if the physical education program only focuses on motor skills and the number of study hours without linking it to the development of core competencies (e.g., self-discipline, exercise awareness, sports ethics), then physical education, that is, encouraging students to exercise regularly and practice sports, will be limited. Therefore, the design of the physical education program for second-year students needs to integrate clear physical education goals, linked to the development of motor skills and health training habits. From an international perspective, this study is consistent with the current trend in university physical education: aiming at comprehensive development, not just "playing sports". It is meaningful to apply it to second-year students, because they have passed the initial stage and need to move on to "sustainable training" and "motor awareness"<sup>[3]</sup>

Chin-Cheng et al<sup>[4]</sup> showed that the innovation of content and methods in the Physical Education (PE) program - specifically the application of multimedia in teaching - has a direct impact on students' sports attitudes and behaviors. The results showed that the experimental group, which learned through videos, illustrations and interactive modules (30 minutes/week for 6 weeks), achieved significantly higher levels of sports attitudes after class than the group that learned using the traditional method. From the perspective of motivational psychology, this result shows that the content of the PE program has the ability to impact self-efficacy and autonomous motivation - two core factors according to Self-Determination Theory. Technological support helps students understand the lesson better, self-evaluate their progress and feel proactive in the training process, thereby enhancing their intrinsic motivation for sports activities. This is consistent with Wang & Zhang<sup>[3]</sup> finding that PE programs lacking core competencies such as self-discipline, sports responsibility, or understanding of sports ethics will reduce student participation and engagement. Conversely, a well-designed, technology-rich program that allows students to be autonomous and take ownership of their learning process will increase their interest, confidence, and genuine engagement. For second-year students - the transition from "getting used to" to "being active" in physical training - a multimedia-oriented approach to content organization is entirely appropriate. The enhancement of technology not only helps to consolidate knowledge and skills but also shapes positive attitudes and

encourages regular sports practice behavior. A physical education course designed in this way can serve as an effective starting point, helping students form sustainable physical exercise habits and maintain physical activity outside of school hours, thereby enhancing overall fitness and developing a healthy lifestyle<sup>[4]</sup>.

Li et al.<sup>[5]</sup> conducted a pilot study in China with 110 PE students, randomly assigned to a Sport Education Model (SEM) teaching group and a traditional teaching group, in volleyball for 16 weeks. The results: both groups improved, but the SEM group had greater improvement in competition skills, game performance, and content knowledge (common content knowledge & specialized content knowledge). The analysis showed that a PE program for second-year students, if designed according to the SEM model, that is, with “seasons”, teams, and different roles for students (not just players), can improve the effectiveness of physical education: students not only learn but also participate responsibly, develop skills, knowledge, and attitudes toward exercise. Regarding physical education, the SEM group is more likely to form exercise habits, sportsmanship, and commitment than the traditional method. Therefore, when designing the physical education program for second-year students, choosing the SEM model or integrating its components can contribute to improving the effectiveness of physical education<sup>[5]</sup>.

Brown et al.<sup>[1]</sup> examined the factors influencing physical activity of university students: environment, motivation, and barriers through a multi-country analysis. They found that although university students have more opportunities than high school students, there are still major barriers, such as academic pressure, stressful schedules, limited facilities, and lack of personal motivation. This result poses a challenge for the PE program for second-year students: if the program only teaches in the classroom without considering the environment outside the classroom (e.g., class schedules, gym conditions, encouragement to participate in extracurricular activities), it is difficult to achieve the physical education goals. Therefore, the relationship between the physical education program and physical education (continuing exercise outside the classroom, maintaining exercise after the course ends) needs to be flexibly designed, creating favorable conditions for second-year students to participate in regular exercise, such as organizing extracurricular activities, guiding students to make training plans, and stimulating proactive awareness<sup>[1]</sup>.

Qian (2025)<sup>[6]</sup> conducted a global bibliometric study on (physical literacy) - the ability and commitment to lifelong physical activity. The study found that in the field of PE and university physical education, research trends focused on: (1) developing physical competence, knowledge, and attitudes; (2) emphasizing the international context, comparing countries; (3) interested in moving from "exercise" to "active lifestyle". Although not directly examining the second-year PE curriculum, this study provides a valuable international context: when a PE curriculum is designed for second-year students, it should go beyond basic movement skills and should be linked to the development of lifelong movement competencies, movement literacy, and proactive attitudes toward participating in movement. That is, the PE curriculum should become part of "physical education" rather than just a compulsory subject from which university physical education (promoting movement, organizing physical activities, and training outside of lectures) can be reinforced (Qian, H, 2025)<sup>[6]</sup>.

*H2: Facility quality affects perceived behavioral control (TPB) and social support. 7 Zhang & Phee<sup>[8]</sup> highlight the mediating role of sports culture in this relationship.*

Black et al.<sup>[9]</sup> research demonstrates the long-term effects of attending a secondary school with inadequate sports facilities on physical activity, health, and socioeconomic status in adulthood. The team used data from the British National Child Development Study, a longitudinal survey of the 1958 birth cohort in England, to exploit the “quasi-random” variation in the quality of sports facilities between schools in the same geographical area. They used control techniques to rule out the association between lack of sports

facilities and other types of facilities, and also checked that students' allocation to school was "randomized" conditional on selection. The main results showed that attending a school with inadequate sports facilities reduced the likelihood of participating in physical activity in adulthood, a modest but statistically significant effect. Conversely, they found no evidence that lack of sports facilities had a negative effect on physical health, mental health, health-related lifestyles, or socioeconomic status in adulthood. In summary, the study by Black et al reinforces the view that the school environment, specifically sports facilities, may play a fundamental role in the formation of physical activity habits in adulthood, although the effect on all health or socioeconomic outcomes is small<sup>[9]</sup>.

Brown, C. E. B et al.<sup>[1]</sup> conducted a systematic review of 39 studies with 17,771 students, identifying 56 "barrier" and "facilitator" factors influencing physical activity among college students, and mapping these factors to the Theoretical Domains Framework (TDF) and the COM-B model to determine which domains had the greatest relative influence. The results showed that the three most important TDF domains, "environment and resources," "social influence," and "goals," appeared in more than 50% of the studies reviewed. Domains such as "intention," "emotion," "knowledge," and "skills" had only a relatively lower influence, and there was even no data related to the domains "memory, attention, and decision-making" or "optimism." The research method used a framework analysis to code and classify elements from qualitative, quantitative, and mixed studies, ensuring the comprehensiveness and systematicity of the review. From an applied perspective, the author suggests that interventions to increase physical activity among university students should focus on environmental design (e.g., scheduling time, facilitating access to facilities), enhancing social support (e.g., exercising with friends), and setting clear goals (e.g., prioritizing physical activity as part of a lifestyle). However, the study also has notable limitations: only one study in total used TDF directly, only collecting data when  $\geq 50\%$  of participants reported a factor as a barrier/facilitator, may miss less common but still important factors, and no quality assessment of the included studies was conducted. Thus, the paper provides a solid theoretical and empirical basis for developing physical activity promotion programs in college students, but additional research is needed to tailor them to specific groups and implement them in real-world settings.<sup>[1]</sup>

Hrušová, D et al.<sup>[2]</sup> studied a blended learning model in physical education for university students, through the organization of outdoor aerobic activities and the use of the Strava activity tracking application. Their main objective was to assess intrinsic motivation and ICT-related motivation when students participated in OASA within the framework of a blended learning model. Research methods: 368 students (185 female, 183 male, aged 19-23) participated, each of whom performed 10 training sessions per semester (a total of 3,680 training units). Students used the Strava app to record their activity data (running, cycling, walking) and join an online community, and also answered a motivation questionnaire. The results showed that the most popular activity was running (58%), followed by walking (16%) and cycling (13%). In terms of motivation, "keeping fit" (94%) and "staying healthy" (90%) were the top two reasons. Having fun (88%) and reducing stress (83%) also played a big role. The motivation to compete with others was low (32%). In addition, 70% of students said they were motivated by the non-competitive model, which allows for personalised training without comparison with others. The author discusses that blended learning models combined with activity tracking tools and online community platforms have the potential to support the development of exercise habits, encouraging students to participate in regular physical activity in the university context. They also noted that although students participated, they tended to only complete the minimum required level, suggesting that maintaining motivation beyond the baseline is a challenge. In conclusion, the study provides evidence to support the application of blended learning in university physical education, especially when combining digital tools and outdoor exercises, to improve student motivation,

especially motivation for health and psychological well-being. However, to achieve optimal results, further research on how to maintain motivation, in-depth analysis of influencing factors, and long-term design is needed<sup>[2]</sup>.

Sørensen and Lagestad's<sup>[10]</sup> study focused on exploring students' reflections on the learning outcomes achieved from different teaching methods in the subject of Physical Education (PE). This study combined qualitative and quantitative methods to provide a comprehensive view of how teaching methods – including traditional teaching (teacher-centered), experiential learning, and collaborative learning methods – influenced students' perceptions, skills, motivation, and career attitudes. A total of 128 students participated, who were asked to respond to a questionnaire combined with individual learning diaries and group interviews. The quantitative results showed that students rated the experiential and collaborative learning method as helping them develop more in terms of reflective skills, communication skills, strategic thinking, and intrinsic motivation compared to the traditional method. In contrast, the traditional method was found to help consolidate basic theoretical knowledge and improve presentation and classroom organization skills, but provided less opportunity for students to develop creativity and autonomy<sup>[10]</sup>. Qualitatively, responses showed that students felt more interested in participating in real-life situations, being empowered to make decisions and self-assess, which is an important factor in forming professional competence in the direction of "reflective physical education teachers". Research also showed that a flexible combination of teaching methods brings the highest efficiency. Students want to experience an integrated learning model in which the lecturer acts as a guide, facilitating active learning, while still ensuring a system of professional knowledge. This is consistent with Dewey's (1938) theoretical views on "learning by doing" and Kolb's (1984) experiential learning cycle model, which emphasizes the role of practical experience combined with reflection. However, the study also acknowledged some limitations: the sample size was small, mainly at a Norwegian university, so the ability to generalize was limited. At the same time, the responses were subjective, possibly influenced by personal feelings or teacher-student relationships. In terms of practical significance, the study contributes to the orientation of innovation in the physical education teacher training program, emphasizing the importance of developing reflective capacity and student-centered teaching organization capacity, instead of focusing only on techniques and professional knowledge. For Vietnam, when the 2018 general education program emphasizes autonomy and creativity in physical education, the model proposed by this study can be a practical reference for sports pedagogical schools<sup>[10]</sup>.

In Zhang and Phee's study<sup>[7]</sup>, the authors analyzed how the quality of sports facilities on university campuses in Xi'an affects students' physical activity participation through two core psychological mechanisms: perceived behavioral control (PBC) within the framework of the Theory of Planned Behavior (TPB) and social support. The results showed that when facilities such as playgrounds, gyms, stadiums and equipment systems are well invested, students tend to perceive physical activity participation as easier (increased PBC), while a favorable physical environment also encourages social interactions, support from friends and the school (increased social support). However, Zhang & Phee emphasized that sports culture plays an important mediating role in this relationship. That is, even with good facilities, students' physical activity levels are still low if there is a lack of a positive sports culture for example, lack of sports media, little encouragement from the school, weak student movement, or lack of active community. The study used a quantitative survey of students at universities in Xi'an (although details on sample size and measurement tools are not fully presented in the abstract). Data analysis showed that the quality of facilities is not only directly related to students' physical activity frequency, but also indirectly through increased perceived behavioral control and social support two psychological factors that are significantly enhanced in the context of a strong sports culture. Based on these results, Zhang & Phee suggest that universities should implement a

comprehensive strategy: (1) investing in physical facilities, and (2) developing sports culture by organizing movements, building a sports community, enhancing communication, and raising awareness of the benefits of exercise. The limitations of the study lie in the cross-sectional design, lack of long-term follow-up, and self-reported data that may distort actual participation levels. However, the study provides important evidence for educational management: to promote students' physical activity, it is necessary to combine both physical investment and nurturing sports culture, as this is the decisive mechanism to increase PBC, increase social support, and increase students' exercise frequency<sup>[8]</sup>.

*H3: Han et al.<sup>[11]</sup> show physical fitness predicts self-efficacy, mediated by exercise behavior.*

In the study by Han et al.<sup>[11]</sup>, they surveyed 1,923 university students and demonstrated that physical fitness (PF) can predict students' self-efficacy, and exercise behavior plays a mediating role between physical fitness and self-efficacy. Specifically, PF explains 24.7% of the variance in self-efficacy, and when exercise behavior is added to the model, the explained variance increases to 29.4%. They concluded that improving PF through exercise can enhance students' self-confidence and adaptive capacity<sup>[11]</sup>. This is an important indicator for integrating general physical exercises into physical education for second-year students because it is not only related to physical health but also to psychological development and positive learning attitudes.

Another study by Watson et al.<sup>[12]</sup> systematically evaluated classroom-based physical activity interventions for elementary and middle school students. The results showed that despite the small number of studies, interventions such as “active breaks” had a small but significant positive effect on classroom behavior and school engagement  $d = 0.55$  compared to other types<sup>[12]</sup>. Application to second-year students: general physical development exercises can be integrated into physical education classes or between classes to increase participation, concentration, and course performance.

Pelemiš et al.<sup>[13]</sup> studied 315 primary school students (10 years old) and grouped them according to their physical activity (PA) level in physical education classes. The results showed that the low activity group had significantly lower fitness scores (e.g., flexibility, vertical jump, pull-ups, etc.) than the medium and high PA groups<sup>[13]</sup>. Although the subjects were young students, the results suggest that the intensity and volume of general physical exercises in physical education classes affect fitness, and therefore, for second-year students, designing appropriate general physical exercises can help improve overall fitness and support the physical education subject.

In the study "Physical Activity, Fitness, and Physical Education: Effects on Academic Performance"<sup>[14]</sup>, the authors showed that moderate to high levels of physical activity  $\geq$  greater than 90 minutes per week, were associated with better academic performance in college students. Thus, not only do fitness and exercise affect physical and psychological health, but they are also linked to academic performance, suggesting that when using general fitness training in physical education, the goal can be broader than just improving health, but also supporting the academic success of sophomores.

Finally, a study by Brown et al.<sup>[1]</sup> examined factors influencing physical activity in college students and found that "working out with others" increased motivation, accountability, and participation in exercise<sup>[1]</sup>. Therefore, in physical education for sophomores, organizing common physical exercises in groups, with peer interaction or small groups, will increase participation and exercise effectiveness, thereby improving overall fitness and supporting physical education goals. The above research clearly shows that the integration of general physical development exercises (such as endurance training, flexibility, basic strength, and group activities) into physical education for second-year students has a solid foundation. Good physical fitness not only contributes to health but is also related to self-efficacy, learning attitude, learning results, and

participation in the subject. Therefore, physical education needs to design general physical exercises with appropriate intensity and volume, along with group interaction, to achieve comprehensive effectiveness.

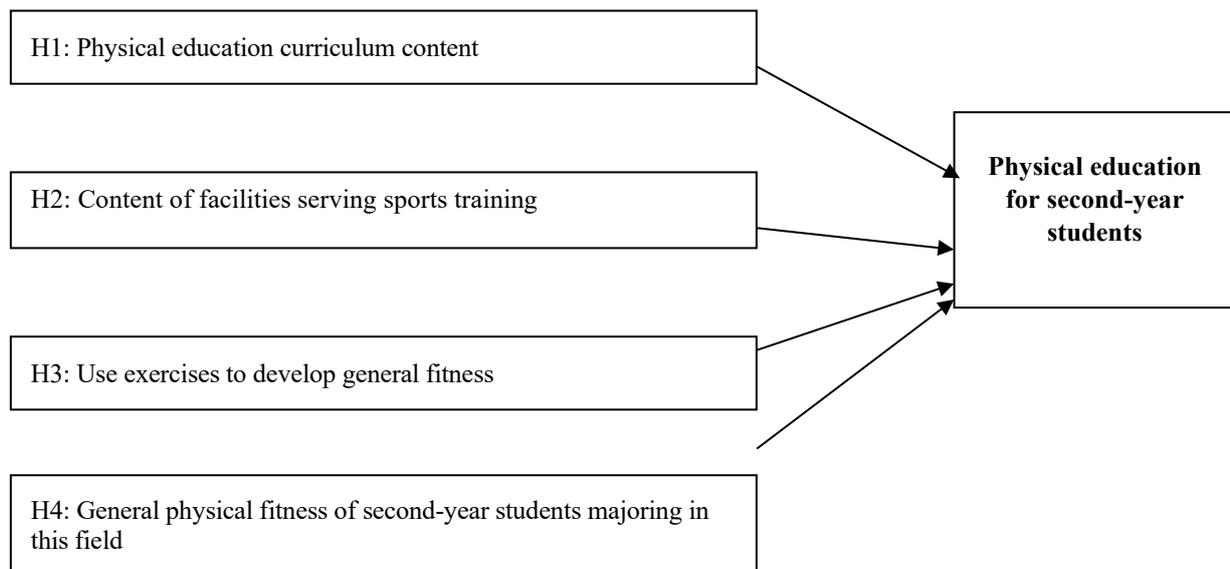
*H4: Students' physical fitness levels correlate with body image and social comparison processes.*

Systematic studies of physical activity and fitness in university students indicate that the majority of students maintain “acceptable” but suboptimal fitness levels, and that there are significant differences across countries, training programs, and cultural settings<sup>[15]</sup>. However, a highlight of recent studies is that student fitness is not simply a reflection of activity levels, but is also closely linked to body image and social comparison mechanisms. Students with low fitness levels often evaluate their own body shape negatively and tend to compare unfavorably with friends or social media role models, thereby reducing motivation to participate in physical activity. In contrast, students with positive body image and less influenced by social comparison are more likely to participate actively in physical education programs. This is especially important for second-year students – a period of increased academic pressure, psychological stress and reduced physical activity. If PE programs only maintain traditional methods without appropriate interventions, students may fall into a spiral: reduced physical fitness → negative body image → limited physical activity participation → further physical decline. Therefore, surveying the general physical fitness of second-year students not only helps to design more effective PE programs, but also helps to identify groups of students who are vulnerable to social comparison and at risk of body image decline, thereby implementing appropriate psycho-motor support solutions.

A recent comparative study on the physical fitness of college students from different grades and majors in Jiangxi province<sup>[16]</sup> surveyed nearly 8,800 Chinese students from first to third year, 12 different majors, and found: (1) low overall physical fitness level with a “passing” rate of only about 75.3%; (2) second year students (sophomores) had lower fitness scores than first and third year students in most indices; (3) humanities/non-sedentary majors had lower physical fitness than science majors; (4) an inverted “U” correlation between BMI and PFI. This study shows that it is during the second year, which is a transitional period, that academic pressure and reduced physical activity can increase the risk of physical decline. Therefore, physical education for second-year students should pay special attention to: assessing the current physical fitness, designing lessons to improve weak indicators, and coordinating programs according to majors. Timely surveys and interventions will support the maintenance and improvement of physical fitness, thereby helping physical education work to be more effective.

From the above studies, it can be concluded that the general physical condition of second-year students (such as being weaker than first-year, third-year, or in non-sport majors) has a close relationship with the effectiveness and direction of the PE programs for them. If the physical condition is not clearly understood, PE can easily become a “general program” that does not meet the individual needs of second-year students, leading to low effectiveness. On the contrary, if the PE program is designed based on a survey of the actual situation (for example, physical assessment at the beginning of the course), with differentiation by major and year, the ability to improve physical fitness and maintain exercise habits will be higher.

This study developed the framework shown in Figure 1 based on a review of the literature.



**Figure 1.** Study framework

Participants: 40 second-year male PE majors (D2024) from Hanoi Capital University.

Design: A 5-month experimental program with two 60-minute sessions weekly.

### Measures

Quantitative: Structured surveys assessing motivation (SDT-based scales), perceived behavioral control (TPB), and social support.

Qualitative: In-depth interviews exploring group dynamics and motivational barriers.

Data Analysis: Thematic analysis for qualitative data; regression models to test psychological mediators (e.g., motivation as a mediator between facilities and activity levels).

Ethical Considerations: Informed written consent was obtained, with confidentiality assured.

## 3. Results and discussions

### *Program content of specialized subjects*

The D2024 training program for Civic Education major is built relatively stably on the basis of the general regulations of the Ministry of Education and Training as well as the training program framework of Hanoi Capital University. In the first two semesters, students are equipped with general knowledge; then, knowledge blocks on methodology, pedagogical skills, specialized education, internship and graduation thesis are arranged from semester 3 to semester 8 in a reasonable order. The general theory part is arranged in the first two semesters with a total duration of 14 periods; the specialized theory part is also designed with a total duration of 14 periods in accordance with the regulations of the Ministry of Education and Training. Along with that, the physical education program in the training framework includes compulsory subjects such as Athletics, Physical Education and elective subjects such as Football, Basketball. However, the number of elective courses is still limited, not meeting the diverse psychological needs of students, especially the differences in exercise preferences, physical abilities and personal development needs. This requires expanding the list of elective courses to increase flexibility, create learning motivation and contribute to improving the effectiveness of physical education throughout the course.

For compulsory subjects: The program includes basic sports such as Athletics, Gymnastics, and Swimming. Each subject is divided into 3 modules with a large total number of credits (from 7 to 8 credits per subject). The division into many modules helps students have time to practice specialized skills, from basic to advanced. The practice time accounts for a very high proportion (from 60 hours/module or more), showing the focus on practicing practical skills. This is very important for the PE industry, where practical skills are the decisive factor.

In addition to the structural and skill-based advantages of the curriculum, psychological and pedagogical enhancements are also necessary to optimize learning outcomes. Psychological additions such as integrating Self-Determination Theory (SDT) based interventions can strengthen students’ sense of autonomy and intrinsic motivation for example, allowing students to exercise choice in certain learning activities or training methods. Moreover, addressing social loafing in group tasks is crucial for maintaining accountability and equitable contribution in collaborative practice sessions. Recent evidence by Sørensen & Lagestad<sup>[10]</sup> shows that experiential and collaborative learning approaches significantly enhance intrinsic motivation and the development of reflective skills compared to traditional teaching methods. These insights suggest that combining structured skill training with scientifically grounded psychological strategies will help maximize both performance and motivation among second-year PE students.

For electives: The program offers a rich list of electives, including popular sports such as Soccer, Basketball, Badminton, Table Tennis, Volleyball, Shuttlecock, and martial arts and fitness such as Karate, Taekwondo, Vovinam, Traditional Martial Arts, Sports Dance, and Aerobics. Students have the right to choose 3 of these subjects, helping them develop their strengths and improve their skills in their favorite sports. This also helps students diversify their knowledge and skills to be able to teach many different subjects in the future. Each elective subject is also divided into 3 modules, ensuring specialization.

This program has devoted a large proportion to general and specialized physical training subjects, reflecting the characteristics of the physical education industry. The combination of compulsory subjects (foundation) and elective subjects (specialized, diverse) is a big plus. This not only helps students have a solid foundation but also creates conditions for them to develop according to their own interests and strengths.

*Facilities for physical training and sports*

Facilities serving sports training activities for second-year students of Hanoi Capital University were surveyed through a survey of the school's facilities. The results are presented in Table 1.

**Table 1.** Current status of facilities serving training of three basic subjects for the second year of the Physical Education major at Hanoi Capital University

No	Subject	Content	Quantity	Level of need satisfaction			
			m <sub>i</sub>	Good response		Not good	
				m <sub>i</sub>	%	m <sub>i</sub>	%
Facility 1 – 98 Duong Quang Ham, Nghia Do, Hanoi City							
1.	Athletics	Stadium	0	-	-	-	100
2.		Running Track	0	-	-	-	100
3.		Weight Training Ground	0	-	-	-	100
4.		High Jump Pad	2	1	50	1	50
5.		Gym	1				

No	Subject	Content	Quantity	Level of need satisfaction			
			m <sub>i</sub>	Good response		Not good	
				m <sub>i</sub>	%	m <sub>i</sub>	%
6.		Mat	2	1	50	1	50
7.		Hoop	20				
8.		Rope	20				
9.		Bar	20				
10.	Swim	Swimming Pool	0	-	-	-	100
Facility 2 – Soc Son Commune, Hanoi City							
1.		Stadium	1	1	100	-	-
2.	Athletics	Running Track	2	1	50	1	50
3.		Weight Training Ground	1	1	100	-	-
4.		High Jump Pad	2	1	50	1	50
5.		Gym	1	1	100	-	-
6.		Mat	0	0	-	-	-
7.		Hoop	20	10	50	10	50
8.		Rope	20	10	50	10	50
9.		Bar	30	20	66.6	10	33.4
10.	Swim	Swimming Pool	0	-	-	-	100

*Source: Survey from the research data on the topic*

Table 1 shows: Detailed assessment of facilities for teaching and learning three sports at Hanoi Capital University. In general, facilities for sports at the two campuses of Hanoi Capital University are still limited, especially at Campus 1 (98 Duong Quang Ham). While Campus 2 (Soc Son) has better conditions, there are still many items that do not meet the needs.

Assessment: Campus 1 has almost no facilities for students to practice basic sports. Campus 2 - Soc Son commune, Hanoi city, this facility has better conditions than Campus 1, but still needs significant improvement: (i) Athletics: The stadium and weight training ground are both available and meet 100% of the needs. This is a big plus. The running track and high jump bar only meet 50% of the needs, showing a lack of quantity or quality; (ii) Other equipment: There is 1 gym, which meets 100%, but there is no mat. Equipment such as rings, ropes, and sticks all meet a part (50% for rings and ropes, 66.6% for sticks), but there is still a significant part that is not met well; (iii) Swimming: Similar to Campus 1, there is no swimming pool here, leading to the inability to meet the needs of students to study and practice swimming.

Thus, Campus 2 has some complete facilities such as a stadium and gym, but still lacks many other important facilities, and especially a swimming pool. Improving facilities will help improve the quality of physical education, encourage students to participate in sports activities, and contribute to improving the health and mental well-being of all students.

*Use exercises to develop general fitness for students*

To evaluate the current status of using general physical development exercises for second-year students of Hanoi Capital University, the thesis evaluates the use of specialized exercises through 03 sports that students study in the Physical Education program: (i). Athletics 2 and teaching methods. Athletics 2 and

teaching methods; (ii). Basic gymnastics and teaching methods. Gymnastics and teaching methods; (iii). Swimming 1 and teaching methods.

Swimming 2 and teaching methods. The study observed the use of general physical exercises in training sessions in 03 sports of first-year students of Hanoi Capital University. On that basis, the exercises commonly used in physical training for the research subjects were selected. The specific results are as follows:

For short runs, the students were given variable speed runs: 100m x 6 times, 80m x 10 times, 60m x 10 times. XPC runs 100m x 10 times, 120m x 5 times, 200m x 3 times. XPT runs with pedals 100m, 80m, 60m.

**Table 2.** Exercises used to develop physical strength

<b>Athletics</b>	
No	Exercise Name
1.	Speed run 100m x 6 (l)
2.	Run 80m x 10 (l)
3.	Run 60m x 10 (l)
4.	Run high start 100m x 10 (l)
5.	Run high start 120m x 5 (l)
6.	Run high start 200m x 3 (l)
7.	Run low, start with pedals 100m
8.	Run low, start with pedals 80m
9.	Run low, start with pedals 60m
10.	Run high start 1500m (s)
11.	Run high start 800m (s)
12.	Place hand swing (s)
Exercise	
No	Exercise Name
	Physical strength to develop arm muscles (l)
	Physical strength to develop back muscles (l)
	Physical strength to develop abdominal muscles (l)
	Physical strength to develop the flank muscles (l)
Swim	
No	Exercise Name
1.	Flexibility Exercises (s)
2.	Dry Arm Swings (s)
3.	Dry Kicks (s)
4.	Prone Push-ups (l)
5.	Stand-Ups (l)
6.	Supine Crunches (l)
7.	Prone Back and Abdominal Exercises (l)
8.	25m Acceleration Swimming (according to the swimming style)
9.	100m Swimming (100% Strength)
10.	200m Long Swim (75% Strength)

**Source:** Survey from research data on the topic

Physical training is an important job and can use a variety of exercises and training methods. However, in reality at Hanoi Capital University, in the process of teaching physical education content in 03 sports, it shows that: (i) The exercises used to develop physical fitness in the sports studied are still few, not grouped

by physical type and individual physical qualities (ii) New exercises are used based on the personal experience of the lecturer without being scientifically researched to determine specific effectiveness (iii) Exercises are used for all subjects, without distinction of age, gender, physical level.

To be effective, exercises must be diverse and have a clear purpose in physical training, so dividing exercise groups is an important issue. At the same time, each age group and gender, when using physical development exercises, has its own specific problems, so it is necessary to divide physical training exercises into groups for each age group and gender, and at the same time, conduct scientific research to determine the specific effectiveness of the exercises.

*General physical fitness of second-year male students majoring in PE*

To evaluate the general physical condition of second-year male students majoring in Physical Education at Hanoi Capital University, the thesis was tested using the test in Decision No. 53/2008/QD-BGDDT dated September 18, 2008, on assessing and classifying physical fitness of students.

**Table 3.** General physical condition of second-year male students majoring in Physical Education at Hanoi Capital University (n = 40)

No	Test content	RLTT standard	Physical fitness classification					
			Good	%	Obtain	%	Failed	%
1	Sit-up crunch (times/30s)	17 -22	5	12.5	28	70.0	7	17.5
2	Spot jump (cm)	207 -225	5	12.5	29	72.5	6	15.0
3	High start 30m run (s)	5.70 -4.70	5	17.5	30	75.0	5	12.5
4	4x10m shuttle run (s)	12.40 – 11.75	7	17.5	27	67.5	6	15.0
5	5 min free run (m)	950 - 1060	6	15.0	26	65.0	8	20.0

*Source: Survey from the research data on the topic*

The results in Table 3 show that the majority of second-year male students in Physical Education meet the basic physical standards, but the number of students who achieve the "Good" level is limited. This shows a clear differentiation in the physical fitness of students, showing that they are capable of completing the minimum requirements, but not really outstanding. The "Not Satisfactory" rate in some contents still exists, showing that more effective improvement measures are needed.

**Low pass rate:** In general, the rate of male students meeting the physical fitness standards is only average and low. The rate of students failing the test contents is quite high, ranging from 12.5% to 20.0%. This shows that the physical fitness quality of a significant number of specialized students is still limited.

**Low Good Rate:** The percentage of students achieving "Good" in all events is very modest; the highest is 17.5% (in running events), and the rest only reach 12.5% to 15.0%. This reflects the small number of students with excellent physical fitness.

The above analysis shows that the physical condition of second-year male students majoring in Physical Education at Hanoi Capital University is at a good level, but not uniform. Factors such as speed and agility (30m run, shuttle run) are shown relatively well. However, muscle strength and endurance (sitting on the back with sit-ups, jumping in place) still need to be improved. The difference between the "Pass" and "Good" rates in most of the contents shows that the training program needs to focus more on improving quality, helping students not only achieve minimum standards but also develop outstanding physical strength, better meeting the requirements of the profession in the future.

## 4. Conclusion and recommendations

### *Conclusion*

The findings indicate that the Physical Education (PE) program at Hanoi Capital University has fulfilled several foundational objectives, yet still falls short in addressing key social–psychological dimensions essential for enhancing student engagement and long-term participation. Evidence shows that students’ psychological needs for autonomy, competence, and relatedness are not sufficiently satisfied, which limits their intrinsic motivation and sense of belonging in PE classes. Moreover, inadequate sports facilities and constrained training spaces reduce both perceived behavioral control and opportunities for social interaction two factors strongly associated with sustained physical activity behaviors. The current reliance on generic exercise routines also fails to recognize diversity in students’ motivation profiles, fitness levels, and social identities. Such uniformity not only diminishes the relevance of PE content but also restricts students’ ability to form positive self-images as physically active individuals. Overall, the study underscores the need for a more student-centered, socially responsive PE curriculum that integrates psychological need support, facility improvement, and individualized training pathways. Strengthening these components will contribute to a more motivating, inclusive, and sustainable physical education environment for second-year students.

### Limitations and Future Research

This study has several limitations that should be acknowledged. First, the sample size was relatively small and restricted to 40 second-year male Physical Education majors from a single university, which limits the generalizability of the findings to broader student populations. The focus on male students was intentional, aiming to ensure sample homogeneity and control for gender-related physiological differences; however, this design does not allow for gender-based comparative analysis.

Second, the study did not examine differences across academic majors, as participants were drawn exclusively from the Physical Education program. Consequently, variations in motivation, physical fitness, and social–psychological factors among students from other disciplines were not captured.

Third, the research employed a cross-sectional and short-term experimental design, which limits the ability to assess long-term behavioral change and sustainability of physical activity outcomes.

Future research should adopt larger and more diverse samples, including female students and non-Physical Education majors, to enable gender- and discipline-based comparisons. Longitudinal designs are also recommended to examine the long-term effects of psychologically informed Physical Education interventions on sustained physical activity, motivation, and health-related behaviors.

### *Recommendation*

First, facility enhancement should prioritize the creation of physical activity spaces that intentionally promote prosocial behavior and social facilitation. Campus gyms, open sport courts, and multipurpose training zones need to be designed in ways that encourage interaction, cooperation, and peer motivation, such as incorporating group-based training areas, open-sight layouts, and flexible spaces for collaborative exercises. Improving environmental cues lighting, signage, accessibility, and spatial comfort can also strengthen students’ sense of belonging and reduce psychological barriers to participation. Such adjustments align with environmental psychology principles showing that well-designed physical environments significantly influence social engagement and exercise motivation.

Second, student support programs must integrate counseling on body image, stress regulation, and healthy lifestyle habits. Evidence from health psychology indicates that negative body perception and

academic stress are key predictors of physical inactivity among university students. Therefore, universities should organize workshops on self-acceptance, provide on-campus mental-health counseling, and develop peer-support groups that reinforce positive attitudes toward physical activity. Embedding these services into routine student life not only supports mental well-being but also enhances exercise adherence by reducing appearance-related anxiety and motivational fatigue.

Finally, research expansion is essential. Longitudinal studies should be conducted to examine how social support networks friends, classmates, sports clubs, and online communities influence sustained engagement in physical activity. Such studies would allow researchers to identify causal pathways, determine the durability of peer effects, and develop evidence-based interventions tailored to different student groups. By integrating quantitative and qualitative approaches, future research can provide a deeper understanding of how supportive social environments contribute to long-term physical activity adherence, ultimately informing institutional policies and campus-wide health promotion strategies.

## **Consent to participate**

Informed written consent was obtained from each participant at the time of recruitment. The Subjects were informed that they could withdraw from the study at any stage, and they were assured of confidentiality.

## **Conflict of interest**

The authors declare no conflict of interest

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